EVALUATION OF GEOTEXTILE REINFORCED EMBANKMENTS ON THE FARMER'S LOOP ROAD IN FAIRBANKS, ALASKA

A SPECIAL RESEARCH PROBLEM
PRESENTED TO
THE FACULTY OF THE SCHOOL OF CIVIL ENGINEERING

BY

GEORGE PAPAIOANOU

IN PARTIAL FULFILLMENT
OF THE REQUIREMENTS FOR THE DEGREE OF
MASTER OF SCIENCE

JUNE, 1986

GEORGIA INSTITUTE OF TECHNOLOGY
A UNIT OF THE UNIVERSITY SYSTEM OF GEORGIA
SCHOOL OF CIVIL ENGINEERING
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CHAPTER I

INTRODUCTION

Geotextiles have increasingly become an integral part of many civil engineering applications in recent years. Slope reinforcement, retaining walls, road construction, and drainage nets are a few among the many applications of these materials (3,12,16,19). One area which has been receiving more and more attention is the reinforcement of road embankments overlying soft subgrade soils (3,12,16,18,19). Much of the literature relating to the effect of geotextiles upon the performance of these embankments is conceptual in nature and have not been fully supported by experimental and theoretical studies (16). These analyses have primarily focused upon an embankment overlying one particular soft/weak subgrade soil. The analysis of an embankment overlying more than one subgrade soil has generally not been required, but has direct application to certain areas of the country.

1.1 Statement of the Problem

The effect of frozen ground on engineering considerations must allow deviations to conventional design practices. Normally one of two broad principles can be followed based on whether or not the frozen foundation soils are thaw-stable or thaw-unstable (14). When foundation soils are thaw-stable, conventional design and construction methods may be used (14). Where foundations soils are thaw-unstable, conventional design and construction methods must be modified to

attain sufficient functional and economic use of the facility. Previous studies by the Alaska Department of Highways of roadways constructed over permafrost have shown that progressively deeper thawing generally occurs beneath annually snow covered roadway side slopes (9). The insulating effect of snow-covered side slopes prevents the complete refreeze of the underlying soils during the winter which results in a progressive propagation of unfrozen ground or talik to occur annually (22). The degradation of this talik can be further accentuated by drifted or plowed snow accumulating on the road- way side slopes (14). The resulting decrease in shear strength and loss of bearing capacity results in consolidation and slope settlement in the thaw-unstable permafrost or talik (9,22). The thaw settlement which results due to these effects usually show up as lateral cracking on the wearing surface of the roadway (22). (See Figure 1.1)

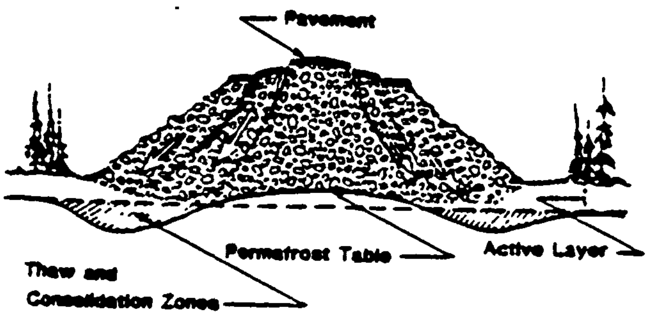


Figure 1.1 Typical roadway distress from thaw beneath slopes.

Methods such as the use of a peat underlay, placement of insulation layers within the embankment, toe berms, and air duct systems have been used to try and prevent and/or maintain the foundation soils in a frozen state (9,10,22). These methods have

aided in the short term maintenance of roadway integrity but have not solved the problems of long term thaw related settlements.

The use of geotextiles as a means of facilitating the construction of embankments on soft/weak foundations has gained in popularity (16). The mechanisms by which the fabric affects the behavior and performance of conventional aggregate-fabric-subgrade systems include the following:

(1) Separation of the aggregate and subgrade soil

(2) Provision of a filter medium to facilitate drainage

(3) Confinement and reinforcement of the aggregate layer

(4) Alteration of the failure mechanism in the subgrade soil (19)

The application of these principles in permafrost regions take on a slightly altered meaning. Separation of the aggregate and subgrade soil would primarily be affected over the talik zones. Although frozen soil may exhibit deformation and separation upon loading, the area of greatest concern would be over the thaw-unstable talik zone. The fabric overlying the thaw zone would prevent the aggregate and thawed subgrade soil from intermixing, which would tend to reduce the effective depth and load distributing capability of the aggregate fill (19).

The presence of a geotextile fabric may induce the formation of a natural filter in the subgrade soil. This process is initiated with the migration of some soil particles through the fabric as a result of fluid flow. Creation of the filter depends upon the soil grain size distribution, the porosity, opening size and opening size distribution of the geotextile, and the hydraulic gradient of the flow (19). The hydraulic gradient may be influenced by the in-situ stress state of the

fabric, where tensile and compressive stresses may alter the pore size distribution in a non-woven fabric (19). The filter induced by the fabric typically maintains the separation of the aggregate and subgrade soil while permitting the free flow of water (19). When the frozen soil under the toe of the embankment thaws, the resulting water is not able to drain off properly. The surrounding permafrost does not lend itself as an adequate drainage boundary so the water will tend to flow through the fabric as the outer edge of the embankment consolidates due to the loss of bearing capacity in the soil. This will result in differential settlement in the embankment causing longitudinal cracks in the pavement. This has been one of the primary failure mechanisms of roadway embankments constructed in these areas.

The primary function of the geotextile is provide tension reinforcement, transmitted from the adjacent soil by soil-geotextile shear stress. The reinforcement tensile forces resulting from shear load transfer transmit soil loads from one location (unstable zone) in a soil mass to another location (stable zone) (3). Granular materials have zero shear strength when no confinement is provided. When confined, granular materials furnish excellent load bearing capacity. The load bearing capacity of the aggregate in an embankment is limited by the shear stress which develop at the aggregate-subgrade interface (19). A layer of fabric at this location can restrain interfacial aggregate movement thereby increasing the interfacial shear strength and corresponding load bearing capactiy of the aggregate layers (19). The load bearing capacity of the aggregate is reduced differentially when talik zones develop at the toe of roadway embankments. Additional

shear stress induced by the geotextile between the aggregate and talik zone provides confinement for the aggregate, thereby increasing the load bearing capacity.

1.2 Objective

The primary objective of this research paper is to estimate the required geotextile properties for reinforcement of the Farmers Loop Road in Fairbanks, Alaska so that surface deformations can be kept within tolerable levels. Numerical analyses are used to evaluate the effect of tensile strength, elastic modulae, and location of the geotextile on the surface deformations of the road.

1.3 Purpose

The purpose of this research is to provide a technically sound and economically feasible alternative solution to the long term problems associated with thaw-unstable foundation soils underlying roadway pavements in permafrost regions such as Fairbanks, Alaska. The functional life of a roadway constructed on permafrost is decreased by the varying properties inherently associated with frozen soil. Substantial changes in bearing capacity, shear strength, and volume contribute to decreasing the functional use of the pavement. Methods, previously described, have been attempted to increase the long term functional life of a roadway but have been successful only in the short run. The main purpose of this project is to evaluate the properties of a geotextile which may be used to reduce the magnitude of embankment deformations given the progressive degradation of the permafrost beneath the embankment slope areas.

1.4 Research Approach

The success of any method of analysis largely depends upon how well the actual conditions may be modelled. For embankments constructed over permafrost four basic failure modes may be defined:

(1) Slope failure within the embankment.

(2) Rotational failure involving the embankment and the foundation soil.

(3) Bearing capacity failure of the thaw-unstable talik.

(4) Differential settlement of embankment as a result of the consolidation of talik zone under the side slopes.

Two computer programs are used to develop the required geotextile properties to evaluate stress distributions for each of these failure modes. STABGM: A computer program for slope stability analysis with circular surfaces and geogtextile reinforcement (7) is used to evaluate the stress distributions for the first two modes of failure. Finite Element Analysis for Dams (FEADAM) and Soil Structure Interaction Program (SSTIPN) are used to analyze stress distributions and evaluate geotextile properties for the third and fourth modes of failure.

Much of the numerical analyses work to date has been applied to embankments overlying soft soils of one type. This literature will be used to develop a logical approach to the unique problems associated with roadway embankments constructed on permafrost.

CHAPTER II

SLOPE STABILITY ANALYSIS

The computer program for slope stability analysis with circular slip surfaces and geotextile reinforcement (STABGM) may be used to analyze internal and external stability of roadway embankments constructed on permafrost. Internal stability refers to the stability of the embankment slope alone. Thus, the circular slip analyses to be employed are restricted to failure through the toe of the embankment. External stability refers to the stability of the embankment and foundation soil combined. For embankments constructed on soft soil, this is the most likely mechanism of failure (3).

2.1 STABGM

The computer program STABGM is a version of the computer program STABR modified in December 1984, by J. M. Duncan and B. K. Low. In addition to the slope stability analysis capabilities provided by STABR, STABGM can be used to analyze slopes containing up to twenty layers of reinforcement, with the forces in the reinforcement layers varying along their lengths.

The program calculates the factors of safety for specified circles, or searches for the circular slip surface having the minimum

factor of safety, using the Bishop's Modified Method or Ordinary Method of slices. Briefly, stability analysis using the ordinary method of slices requires trial of a large number of assumed failure surfaces. The failure zone is divided into a series of vertical slices. It is assumed that each slice acts independently of its neighbor. There is no shear developed between them, and the normal pessure on each side of a slice produced by the adjoining slices are equal (2). A series of calculations are then evaluated to determine the resisting moment, related to soil strength, and the overturning moment, related to the weight of the soil mass. A factor of safety is then evaluated for each trial failure surface. That which has the smallest factor of safety is the most critical surface, i.e., the one on which failure is most likely to occur (20). The Bishop's Modified Method is a more refined solution. The effect of forces on the sides of each slice are taken into account. Through a series of trial and error calculations, a factor of safety is found. The ordinary method of slices yields results which are too conservative (4). The Bishop's Modified Method is more representative of actual conditions and is used for the slope stability analysis on the Farmers Loop Road. The program may be used for either total or effective stress analyses, or a combination of both, and with or without seismic forces.

2.1.1 Program Operation

The program consists of a main program (STABGM) and three subroutines (BISHOP, ROOT, and SOLU). The geometry of a slope is described in an X-Y coordinate system. The X coordinate (horizontal) increases from the top to the toe of the slope and the Y coordinate

(vertical) increases downward, as shown in Figure 2.1. The program is capable of handling irregular slope profiles, tension cracks, soil layers with different properties and nonuniform thickness, complicated pore pressure patterns, and irregular variations of undrained strength with depth. ....(7)

Up to 20 vertical sections may be used to define the geometry of the slope. The first and the last vertical sections, as well as the last soil layer boundary, should be well beyond the extent of any possible slip circle. The strength of the soil in a layer may be specified either by the cohesion intercept (c) and the friction angle (ϕ) which are constant throughout the layer, or by a curve of undrained shear strength versus depth. The total number of points describing the variation of undrained strength with depth may not exceed 20. ....(7)

If a search for the critical circle is desired, the program searches for the circle having the minimum factor of safety by either the Ordinary Method of Slices or Bishop's Modified Method. Either a horizontal line to which all circles are tangent or a specific point through which all circles pass must be defined. In addition, coordinates of the center of the first circle to be analyzed, and the final grid spacing desired in the search must be specified. The search starts with calculation of factors of safety for the specified circle center and for centers spaced symmetrically around the specified center, as shown in Figure 2.2. The centers are generated in the order shown, by rotating around the specified center with a spacing whose length is equal to twice the final grid spacing. ....(7)

If a factor of safety less than that at the center of rotation

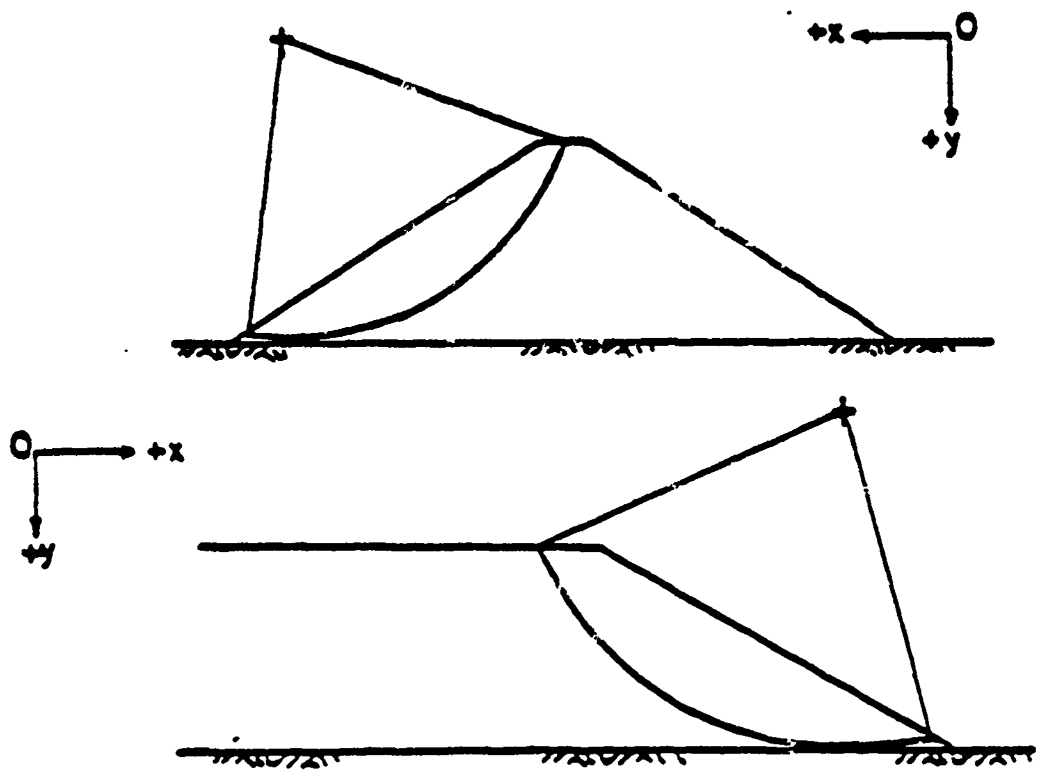


FIG. 2.1 COORDINATE SYSTEM USED IN STABGM

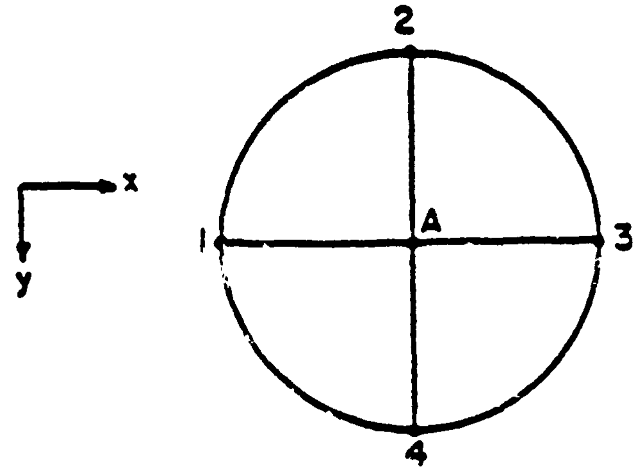


FIG. 2.2 FIRST CLOCKWISE ROTATION AROUND THE GIVEN CENTER A. THE ROTATION STARTS AT POINT 1, WITH RADIUS OF ROTATION TWICE THE FINAL GRID.

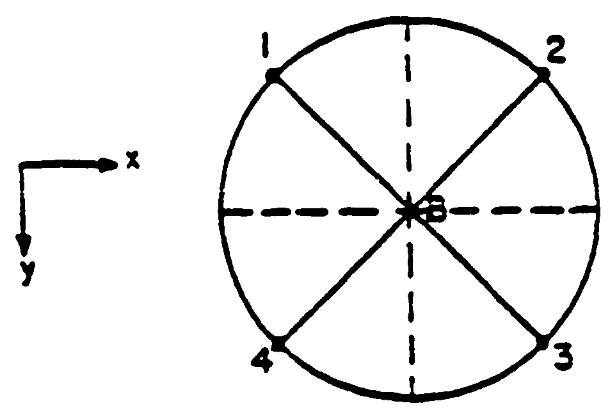


FIG. 2.3 THE 45-DEGREE CLOCKWISE ROTATION AROUND THE CENTER B. THE ROTATION STARTS AT POINT 1, WITH RADIUS OF ROTATION 1.414 TIMES THE FINAL GRID.

is found at any point, this point becomes the new center of rotation. If the difference between the factors of safety at the old and the new centers of rotation is equal to or less than 5% of the factor of safety at the new center of rotation, the spacing is reduced to the final grid spacing. If a full rotation is completed and no factor of safety smaller than that at the center of rotation has been found, a new clockwise rotation round the same center is initiated with the spacing being reduced to the final grid spacing. ....(7)

If a full rotation with the final grid spacing is completed and no factor of safety smaller than that at the center of rotation has been found, then another clockwise rotation around the same center is initiated. This rotation, however, starts at an angle of 45° with the horizontal. The increments of rotation are still 90°, thus filling in the corners of the final grid, as shown in Figure 2.3. If no smaller factor of safety is found in this rotation, the factor of safety at the center of rotation is assumed to be the minimum factor of safety, and the search is terminated. ....(7)

If the minimum factor of safety has not been found after 51 circles have been analyzed, the search is discontinued without printing out a minimum factor of safety. The program then proceeds to search for the minimum factor of safety for the next depth limiting tangent. When this occurs, the user should rerun the problem, specifying a new starting center for the search. It is frequently desirable to specify a rather large grid spacing for the initial search, so that the center of the critical circle can be located, at least approximately, by analyzing relatively few circles. Then a finer grid spacing may be

specified for a final search to locate the center of the critical circle with a higher degree of accuracy. ....(7)

With STABGM, the improvement in the factor of safety is considered to be due to the increased resisting moment provided by the reinforcement:

$$\Delta M_R = \sum_{i=1}^{N} \left[F_{Ri}(Y_{Ri} - Y_c)\right] \qquad (1)$$

in which ΔM_R = resisting moment due to reinforcement

F_{Ri} = force in i th layer of reinforcement where it is intersected by the slip circle being analyzed

Y_{Ri} = Y - coordinate of reinforcement (down is positive)

Y_c = Y - coordinate of circle center

N = number of layers of reinforcement

The factor of safety of the reinforced slope is calculated as follows:

$$F_w = F_{wo} + \frac{\Delta M_R}{M_O} \qquad (2)$$

in which F_w = factor of safety for a given circle with reinforcement

F_{wo} = factor of safety for the same circle without reinforcement, as calculated by the Ordinary Method of slices or Bishop's Modified Method

ΔM_R = resisting moment due to reinforcement, calculated using Equation 1

M_O = overturning moment for the circle

STABGM will search automatically for the circle with the minimum value of F_w to locate the circle with the minimum factor of safety.

Up to twenty horizontal layers of reinforcement can be specified, with as many as nine pairs of values of X-coordinate and force for each reinforcement layer to describe the variation of force along its length.

2.2 Reinforcement of Embankments on Weak Foundations

Geotextile reinforcement may be use at the interface between embankments and weak foundations to prevent failure of the foundation soil (3). Two performance criteria usually considered for normal embankments constructed on weak soil are adequate stability and acceptable total and differential settlement (3). The failure mechanisms associated with embankments constructed on permafrost are similar in principle but not in sequence. Initially, embankments constructed on permafrost are very stable. Permafrost is relatively strong as a foundation soil, but once thawed, the soil becomes very weak relative to its former strength. Additionally, thawing usually occurs under the side slopes of the embankment and not under the centerline which introduces the problem of nonuniform foundation soil properties and differential settlement after construction.

Internal stability can be impaired if the embankment itself lacks internal stability or if embankment failure results from

excessive deformation or failure of the foundation soil under the embankment load (3). Height of the embankment and the steepness of the side slopes govern the internal stability of an embankment. Both parameters also influence the magnitude and distribution of stresses on the foundation soil and, therefore, influence the stability of the foundation soil (3). This interrelation is directly applicable to embankments constructed over permafrost which has thawed. Upon thawing, the talik zone under the side slopes of the embankment loses bearing capacity resulting in settlement of the overlying side slopes. Consequently, the fill material may weaken and loosen thereby impairing embankment internal stability (3). Embankment internal stability can be improved by layers of reinforcement placed within the embankment (3,11,12,16,17,18,19).

The placement of a layer of reinforcement at the embankment/ foundation soil interface affects embankment internal stability two ways. Upon thawing of the frozen soil under the side slopes, the embankment soil may slide along the geotextile interface. This mechanism is more likely to occur if the interface friction angle and adhesion are relatively low between the geotextile and the embankment soil (3). If lateral sliding does not occur, the reinforcement layer will aid in reducing lateral deformations of the embankment, thereby minimizing the risk of creating voids in the fill from cracking (3). In conventional design methodology, prevention of embankment failure due to lateral sliding is the first step (3,12).

The next step is to address foundation soil stability. External failure, or failure of the foundation soil, is said to occur as a

result of one of two mechanisms: slip surface failure or bearing capacity failure (3). Slip surface failure occurs when a portion of the embankment/foundation slides relative to the other stable part. If reinforced, the slip circle would likely go through the embankment, the reinforcement, and the foundation soil. A bearing capacity failure would result when the embankment punches through the foundation soil. This would occur in conventional cases when the reinforcement in the embankment is strong enough to hold the embankment together to prevent a slip surface from developing (3). In permafrost regions, the dynamic effect of frozen soil thawing under an existing embankment does not lend itself to such a structured approach. Failure of an embankment in these regions is likely to encompass a combination of all three failure mechanisms: lateral sliding, slip surface failure, and bearing capacity failure.

2.2 Initial Analysis

Verification of embankment stability as stated earlier must consider three failure mechanisms. For embankments constructed on permafrost, these failure mechanisms are interrelated. Once the frozen soil thaws under the side slopes of the embankment, bearing capacity is lost within the thaw-unstable talik. As the talik consolidates, failure planes may develop within the embankment. If a geotextile is present at the embankment/subgrade interface, the risk of lateral sliding on the outer part of the embankment increases and may add to the development of failure planes.

The evaluation of internal and external stability of the

embankment was initially evaluated using STABGM. The analyses of toe and deep stability were evaluated based upon none, one, two, three, and four layers of reinforcement placed within the embankment. Analysis of the embankment with no layers of geotextile reinforcement was also conducted to determine at what depth the most critical slip circle surface would be located (i.e., the depth of slip circle at which the lowest factor of safety was evaluated).

In addition to critical depths of slip circles, three distinct dimensions of soft thaw zone subgrade soil were also analyzed. The geometry of the soft thawed zone which created the most critical conditions (i.e., lowest factor of safety) in conjunction with the critical slip circle depth was then used throughout the remainder of the analysis. Once this critical depth and critical dimension of thaw zone was established, further analysis of stability with geotextile reinforcement was conducted.

Ideally, reinforcement layers should be placed in the direction of maximum tensile strain (3). For steep slopes, principal compressive strains are nearly vertical and principal tensile strains are nearly horizontal (3). Therefore, reinforcement layers placed horizontally provide a high degree of efficiency. Also, reinforcement is generally placed in horizontal layers to accommodate actual construction sequences.

2.3.1 Assumptions

Figure 2.4 depicts the conditions of the initial analysis. The following assumptions represent the initial analysis:

1. Height of embankment = 5 feet.

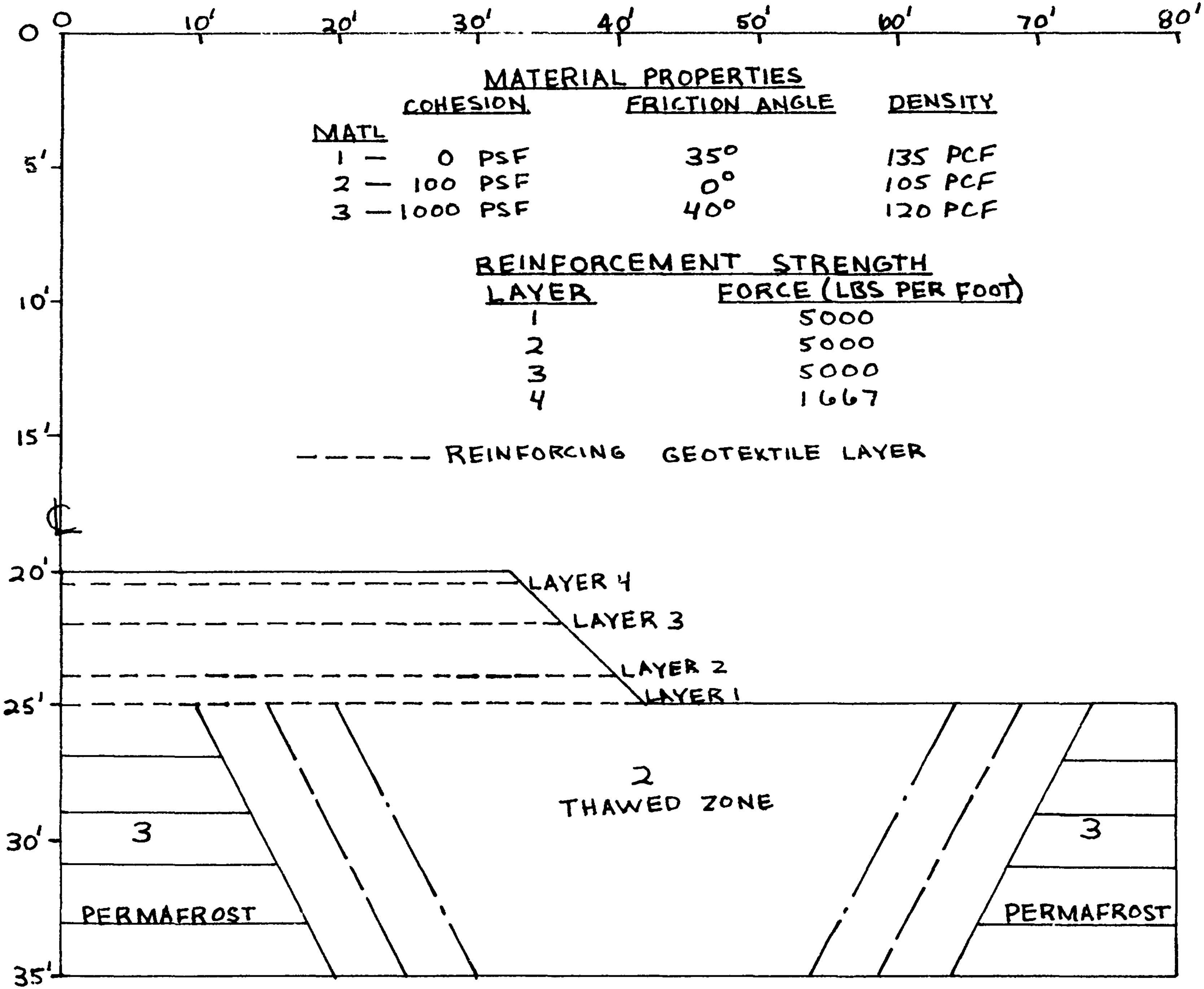


FIG. 2.4 STABGM INITIAL ANALYSIS

2. Slip circles analyzed were located tangentially at depths of 3, 5, and 10 feet below the bottom of the embankment.
3. Thaw zones (soft soil) were located 10, 15, and 20 feet from centerline, symmetric about the toe of the embankment.
4. No seismic activity was taken into account.
5. No pore pressures were taken into account (Total stress analysis).
6. Reinforced embankment stability analyses were conducted with geotextile layers located at 5, 4, 2, and 0.5 feet beneath the top of the embankment.
7. Material properties were modelled as crushed stone in the embankment, soft clay in the thaw zone, and stiff clay in the permafrost zone.

The geometry of the talik zones used in the analyses is consistent with measurements obtained by the Alaska Department of Transportation and Public Facilities (9,15,22). The material properties were modelled according to relative strength to each other. They do not represent actual material strengths. The embankment, crushed rock, was modelled as a complete unit and not separate layers of fill. The thaw zone was modelled as material with very little strength relative to the embankment and permafrost. Material properties selected are shown in Figure 2.4.

Embankment stability was initially analyzed with no layers of geotextile reinforcement. This was to evaluate at which depth and which dimensions of slip circles and thaw zones, respectively, provided critical conditions.

Analysis was then conducted with layers of geotextile reinforcement within the embankment. Embankment stability was then analyzed with one layer of reinforcement placed at the embankment/subgrade interphase. Additional analyses with two, three, and four layers of geotextile placed at 4, 2, and 0.5 feet beneath the embankment, respectively, were conducted to determine the impact on embankment stability. The geotextile reinforcement strength for the analyses with one, two, and three layers was 5,000 lbs per foot of width for each layer. The strength of the upper geotextile layer in the analysis with four layers of reinforcement was estimated to be 1667 lbs per foot of width. Mobilization of the full force in the geotextile layer close to the surface is not practical due to the minimal overburden pressure of the soil. Also, mobilization of the full force in all four layers was modelled to occur three feet from the end of each layer (i.e., zero force applied at endpoints and 5,000 lbs force applied at three feet in from each end for layer one).

2.3.2 Results of Initial Analysis

The analysis with no layers of reinforcement provided two important pieces of information which impacted the remaining analyses. First, the depth at which the critical slip circle occurred was 10 feet below the embankment/subgrade interphase (i.e., lowest factor of safety) (See Appendix A). Second, the dimensions of soft soil (thaw zone) at which critical slip circle conditions occurred were at both 10 and 15 feet from the centerline, symmetric about the toe (i.e., factors of safety were equal for both) (See Appendix A).

The analysis with three and four layers of reinforcement revealed that no appreciable gain in safety occurred as a result of the fourth layer.

2.3.3 Revisions

The following revisions were made to the initial conditions based upon the results obtained (See Figure 2.5):

1. Embankment depth was increased to seven feet.
2. Analysis was conducted with the thaw zone located 10 feet from centerline, symmetric about the toe of the embankment.
3. Analyses were conducted with none, one, two, and three layers of geotextile.
4. Stability analyses were conducted with slip circles located at a depth of 10 feet below the embankment (external stability) and through the toe of the embankment (internal stability).

The embankment depth was increased to seven feet to allow for a more conservative analysis. The greater the embankment height, the lower the factor of safety. Analyses of external stability were conducted to establish the required geotextile reinforcement to achieve a minimum factor of safety of 1.0. Analyses of internal stability were only conducted to compare factors of safety with external stability analyses.

2.4 Results of STABGM Analyses

The results of the revised analyses are summarized in Table 2.1. Geotextile reinforcement strengths of 5,000, 7,000, 9,000, and 8,000

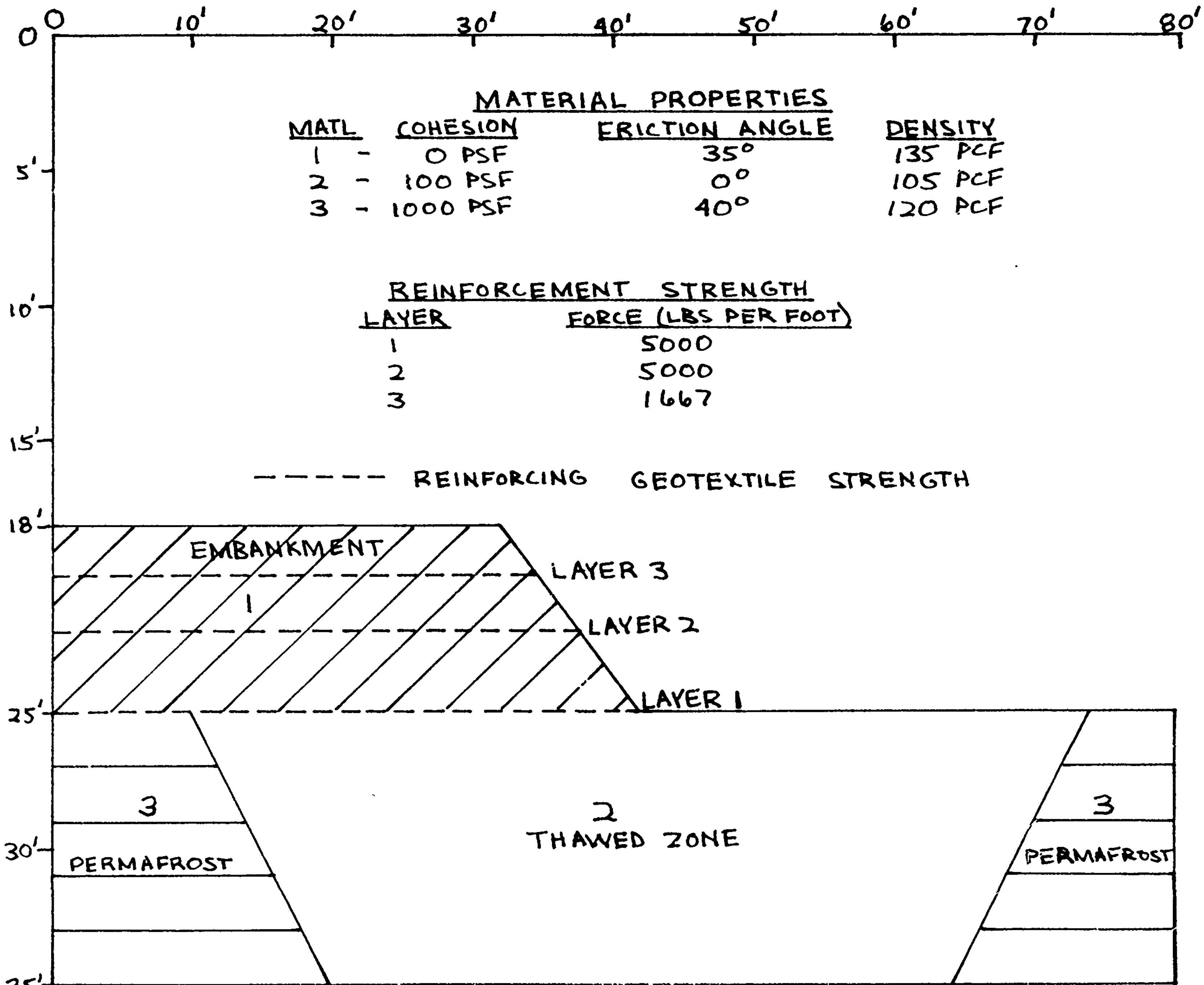


FIG. 2.5 STABGM REVISED ANALYSIS

Table 2.1. Summary of Results

TANGENT SLIP CIRCLE:

Number of Reinforcing Layers	Slip Circle Depth Below Embankment	Factor of Safety	Force of Layer
None	3 ft	0.719	-
	5 ft	0.636	-
	10 ft	0.593 (critical)	-
One (7' below surface)	10 ft	1.043	8000 lbs
Two (4' and 7' below surface)	10 ft	1.035	5000 lbs (each)
	10 ft	1.035	
Three (2', 4' and 7' below surface)	10 ft	1.062	1666 lbs (Layer 3) 5000 lbs (Layer 1

TOE FAILURE:

Reinforcing Layers	Factor of Safety	Force of Layer
None	0.373	-
One (7' below surface)	0.598	5000 lbs
Two (4' and 7' below surface)	0.726	5000 (each)
Three (2', 4', and 7' below surface)	0.748	1666 lbs (Layer 3) 5000 lbs (Layer 1 and 2)

lbs per foot of width were analyzed to produce the strength required for a minimum factor of safety of 1.0 (See Appendix B). Analyses with two and three layers of reinforcement revealed that 5,000 lbs force was required to achieve a factor of safety of 1.0 (See Appendix B). It should be noted that with three layers of reinforcement, the top layer was modelled as mobilizing one third the strength due to the minimal overburden pressure. Also, there was minimal gain in factor of safety from the addition of the third layer. The analyses of internal stability revealed the layers of reinforcement strength required for a factor of safety of 1.0 in the external analyses were not strong enough to achieve the required minimum stability requirements (See Appendix B). These results indicate internal stability is more critical, however, the risk of failure for an embankment overlying soft material is more likely to occur in the soft subgrade soil (3).

CHAPTER III

NUMERICAL ANALYSES

Two computer programs were utilized to analyze the perplexing roadway conditions of the Farmer's Loop Road in Fairbanks, Alaska. FEADAM84: A Computer Program for Finite Element Analysis of Dams was initially used to model existing roadway embankment conditions. SSTIPN: Soil Structure Interactive Program was then used to model conditions for a reinforced roadway embankment constructed on permafrost.

3.1 FEADAM84 Analysis

FEADAM84 is an incremental finite element program for two-dimensional, plane strain analysis of earth and rockfill dams and slopes. It calculates the stresses, strains, and displacements due to incremental embankment construction and/or load application. The non-linear and stress history dependent stress-strain and volumetric strain properties of soils are approximated using a hyperbolic model modified by Seed and Duncan (1984). ....(8)

This program is a modified version of the program FEADAM developed by Duncan, Wong, and Ozawa (1980). The original incremental analysis procedure was coded in the program LSBILD by Kulhawy, Duncan, and Seed (1969). The subsequent program ISBILD, by Ozawa and Duncan (1973) incorporated (a) isoparametric elements with incompatible displacement modes developed by Wilson et al. (1971), (b) a more accurate

procedure for assigning initial stresses to elements, and (c) more efficient computational techniques, including a new equation solver, developed by Wilson (1971). The program FEADAM, by Duncan, Wong, and Ozawa (1980) incorporated (a) a new model for stress-dependent bulk moduli, and (b) new criteria for differentiation between primary loading behavior and stiffer, elastic unloading/reloading behavior. The unloading-reloading model was subsequently deleted by Wong and Seed (1982), who also modified the bulk modulus model. ....(8)

In its present form, FEADAM84 incorporates the following modifications to the earlier program FEADAM:

(a) A modified version of the model for unloading/reloading behavior has been reinstated on an optional basis,

(b) New criteria are employed for determination of whether a given soil element is in a state corresponding to primary loading or unloading-reloading behavior,

(c) A modified lower bound constraint is incorporated in the stress-dependent bulk modulus model,

(d) The new program has the capability to model weightless, linear elastic soil elements with zero initial stresses.

3.1.1 Non-linear Incremental Finite Element Methodology

A successive-increment procedure is used for approximating non-linear stress and stress history dependent behavior of soil, in which progressive loading is divided into a number of small increments, and the soil behavior is assumed to be linear within each increment. The modulus values used to model each soil element are re-evaluated each increment in accordance with (a) the stresses in the element, and (b)

the previous stress history of the element.

The incremental stress-strain relationship for an isotropic material under plane strain conditions may be expressed as follows:

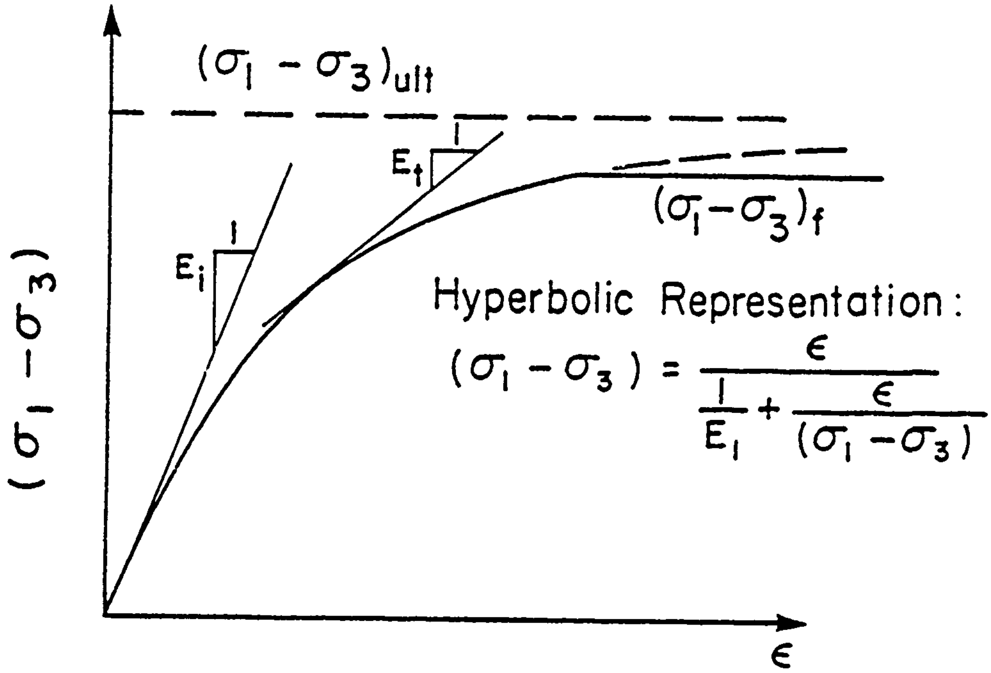
$$\begin{Bmatrix} \Delta\sigma_x \\ \Delta\sigma_y \\ \Delta\tau_{xu} \end{Bmatrix} = \frac{3B}{9B - E} \begin{bmatrix} (3B + E) & (3B - E) & 0 \\ (3B - E) & (3B + E) & 0 \\ 0 & 0 & E \end{bmatrix} \begin{Bmatrix} \Delta\varepsilon_x \\ \Delta\varepsilon_y \\ \Delta\gamma_{xy} \end{Bmatrix} \qquad (3)$$

where $\Delta\sigma_x$ and $\Delta\sigma_y$ are the incremental stresses in the x and y directions respectively and $\Delta\tau_{xy}$ is the incremental shear stress. $\Delta\varepsilon_x$ and $\Delta\varepsilon_y$ are the incremental strains in the x and y directions respectively and $\Delta\gamma_{xy}$ is the incremental shear strain. E and B are Young's modulus and bulk modulus respectively. (1)

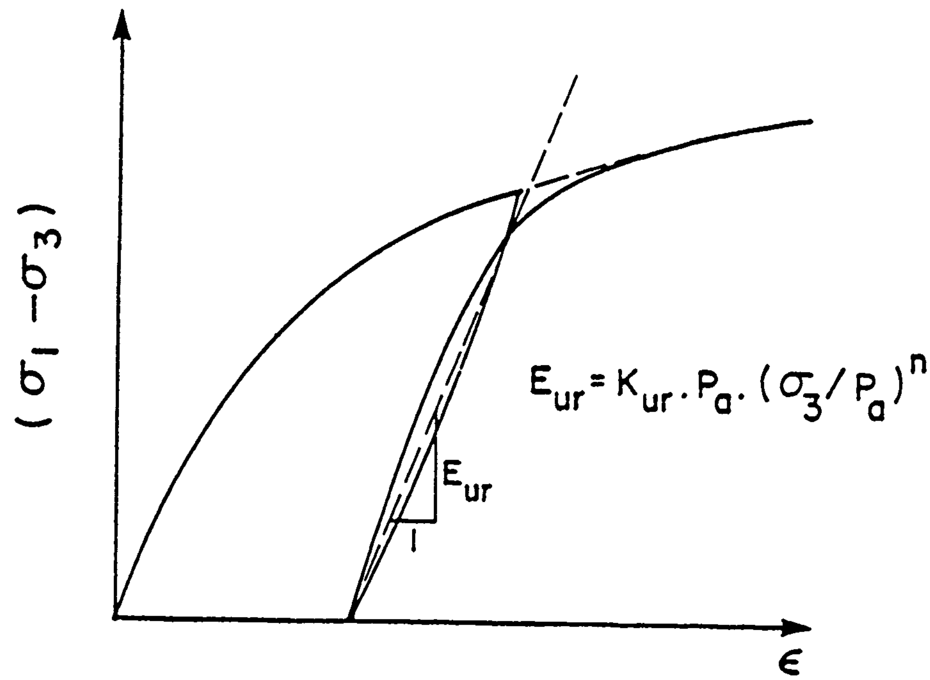
The non-linear, stress-dependent and stress-history-dependent soil behavior model is a modified version of the hyperbolic stress-strain, strength, and volumetric strain model proposed by Duncan et al. (1980). The original (1980) model has been modified in order to : a) provide improved modelling of soil behavior during unloading/reloading, b) eliminate a source of potential computational instability for some types of incremental loading paths, and c) provide improved modelling of bulk moduli at low stress levels and high confining stress. ....(8)

The original (1980) model assumes that stress-strain curves for soils at a given confining stress (σ_3) can be approximated as hyperbolas shown in Figure 3.1(a). The hyperbola in this figure can be represented by an equation of the form

$$(\sigma_1 - \sigma_3) = \frac{\varepsilon}{\frac{1}{E_i} + \frac{\varepsilon}{(\sigma_1 - \sigma_3)_{ult}}} \qquad (4)$$

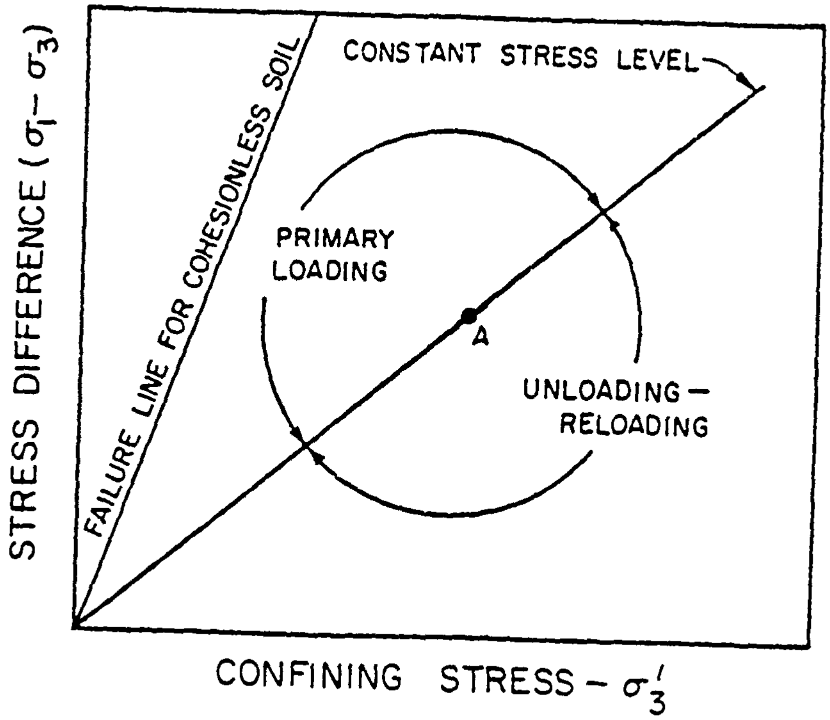


(a) Hyperbolic Representation of Stress-Strain Curve for Primary Loading.

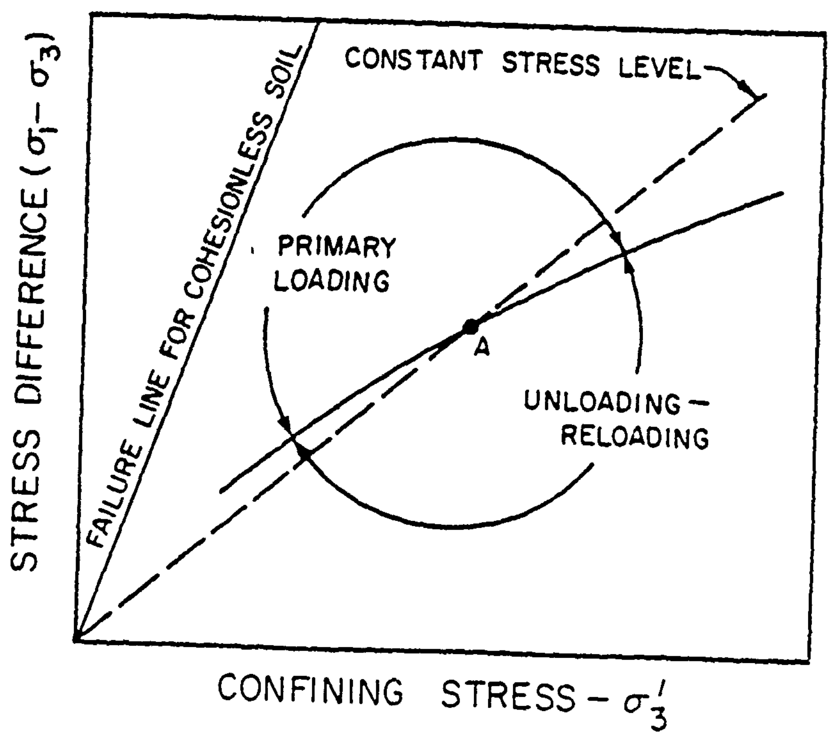


(b) Linear Unloading-Reloading Stress-Strain Relationship

FIG. 3.1 HYPERBOLIC MODEL FOR STRESS-STRAIN BEHAVIOR



a) Stress Level Criteria



b) Stress State Criteria

FIG. 3.2 COMPARISON BETWEEN STRESS LEVEL AND STRESS STATE CRITERIA FOR ASSIGNMENT OF UNLOADING-RELOADING MODULI

where E_i is the initial tangent modulus, and $(\sigma_1 - \sigma_3)_{ult}$ is the asymptotic value of deviatoric stress. In order that the hyperbolic curve should fit the actual stress-strain curve of a given soil as closely as possible $(\sigma_1 - \sigma_3)_{ult}$ is always greater than the compressive strength of the soil $(\sigma_1 - \sigma_3)_f$. The two values are related by a constant failure ration (R_f) as

$$(\sigma_1 - \sigma_3)_f = R_f(\sigma_1 - \sigma_3)_{ult} \tag{5}$$

and R_f is typically between 0.6 to 0.9 for most soils. When the deviatoric stress exceeds $(\sigma_1 - \sigma_3)_f$, a failure condition is assumed as shown in Figure 3.1(a). The deviatoric stress at failure is determined by the familiar Mohr-Coulomb failure criteria as

$$(\sigma_1 - \sigma_3)_f = \frac{2c \cdot \cos\phi + 2\sigma_3 \cdot \sin\phi}{1 - \sin\phi} \tag{6}$$

where c and ϕ are the cohesion intercept and friction angle of the soil. The model allows variation of ϕ as a function of σ_3 as

$$\phi = \phi_o - \Delta\phi \cdot \log_{10}(\frac{\sigma_3}{P_a}) \tag{7}$$

where ϕ_o = the soil friction angle at confining stress of $\sigma_3 = P_a$,

$\Delta\phi$ = the reduction in ϕ for each 10-fold increase in σ_3, and

P_a = atmospheric pressure, introduced in order to make the model independent of the system of units chosen.

The instantaneous slope of the hyperbolic stress-strain curve shown in Figure 3.1(a) is the tangent modulus E_t, which is a function of confining stress (σ_3) and stress level (SL), and which can be expressed as

$$E_t = [1 - (R_f \cdot SL)]^2 \cdot K \cdot P_a \cdot (\sigma_3/P_a)^n \qquad (8)$$

where K,n = Model parameters (constants) relating to the initial modulus (E_i, see Figure 3.1(a)) to the confining stress σ_3 as

$$E_i = K \cdot P_a \cdot (\sigma_3/P_a)^n \qquad (9)$$

and SL = Stress Level, defined as the ratio

$$SL = (\sigma_1 - \sigma_3)/(\sigma_1 - \sigma_3)_f \qquad (10)$$

The tangent modulus modelled according to Equation 8 increases with increasing confining stress (σ_3) and decreases with increasing stress level (SL). ....(8)

When the current stress level was less than the previous maximum stress level ($SL_{max\ past}$), the unmodified (1980) model assumed the soil to be no longer in a state of primary loading, but rather in an unloading-reloading state. Unloading and reloading were modelled as linear and elastic as shown in Figure 3.1(b). The unloading-reloading modulus were modelled as a function only of σ_3 according to the equation

$$E_{ur} = K_{ur} \cdot P_a(\sigma_3/P_a)^n \tag{11}$$

where K_{ur} is typically 1.2 to 3 times greater than K (the modulus parameter determining E_i). ....(8)

The bulk modulus of the soil is assumed to be independent of stress level, and can be expressed as a function only of σ_3 as

$$B = K_B \cdot P_a \cdot (\sigma_3/P_a)^m \tag{12}$$

where K_B and m are dimensionless parameters (constants). Modelling the bulk modulus (B) as being independent of stress level results in modelling an increase in Poisson's ratio (ν) with increasing stress level because the soil modulus (E_t) decreases with increasing stress level, and Poisson's ratio can be expressed as

$$\nu = 1/2 - E_t/6B \tag{13}$$

The bulk modulus in the (1980) model was at all times constrained such that $E_t/3 < B > 17\ E_t$, which in effect constrained Poisson's ratio such that $0.0 < \nu > 0.49$ (see Equation 13). ....(8)

Together, the soil modulus (E_t or E_{ur}) and the bulk modulus (B) define the stress-strain and volumetric strain behavior of a given material. This relatively simple, straightforward hyperbolic model may be formulated and applied in terms of either total stress (σ) or effective stress (σ') by using input parameters appropriate either for total or effective stress soil behavior.

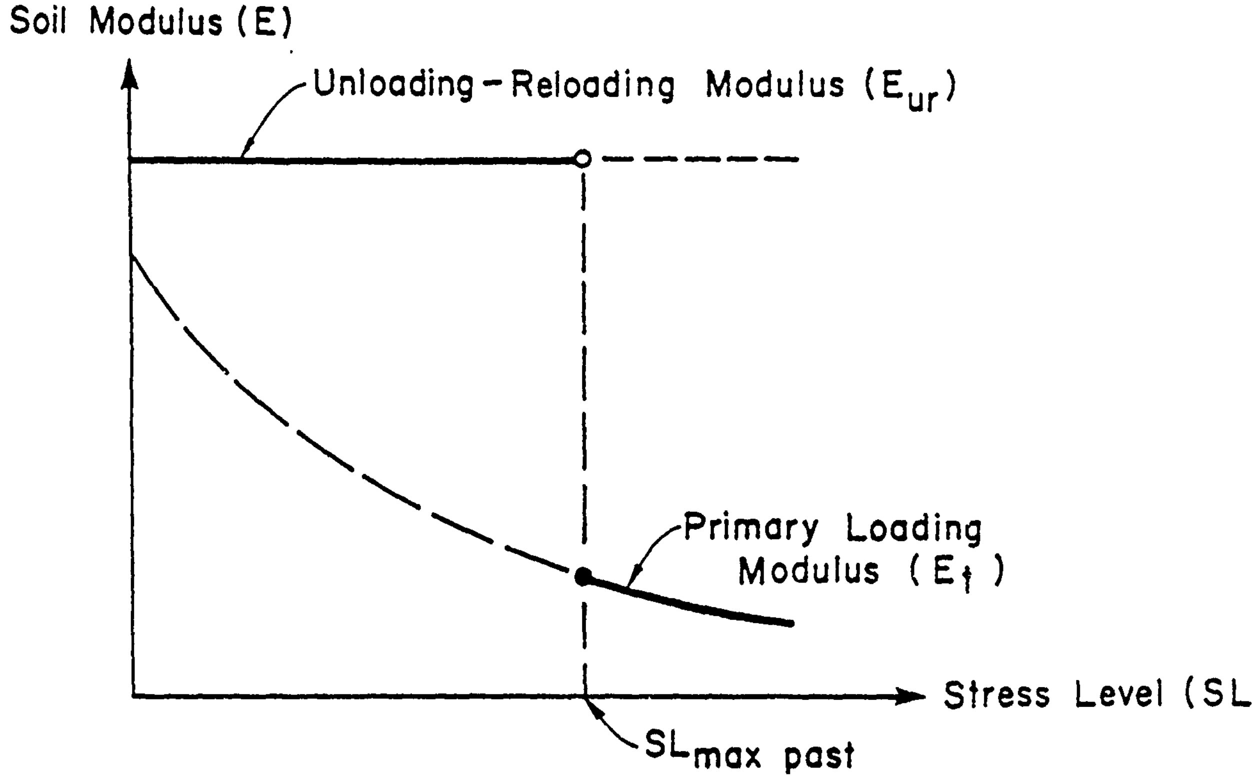
The unmodified (1980) model suffered from two problems concerning unloading-reloading.

The first of the two problems with the previous model for unloading-reloading moduli is that the simple stress level criteria used for differentiating between primary loading and unloading-reloading behavior does not appear adequate for many purposes. The line of constant stress level in Figure 3.2(a) represents the division, according to the earlier (1980) model, between primary loading and unloading-reloading stress paths for an element of soil currently existing at a stress condition represented by point A, where the stress level at A equals the maximum stress level achieved so far ($SL_{max\ past}$). This division between primary loading and unloading-reloading is defined by assuming unloading-reloading moduli for all conditions where $SL < L_{max\ past}$. Subsequent investigations have indicated that this simple stress level criteria for assignment of unloading-reloading moduli should be modified in order to include consideration of variations in the confining stress (σ_3) as well as variations in stress level. The new (modified) model therefore distinguishes between primary loading and unloading-reloading based on "stress state" (SS) defined as

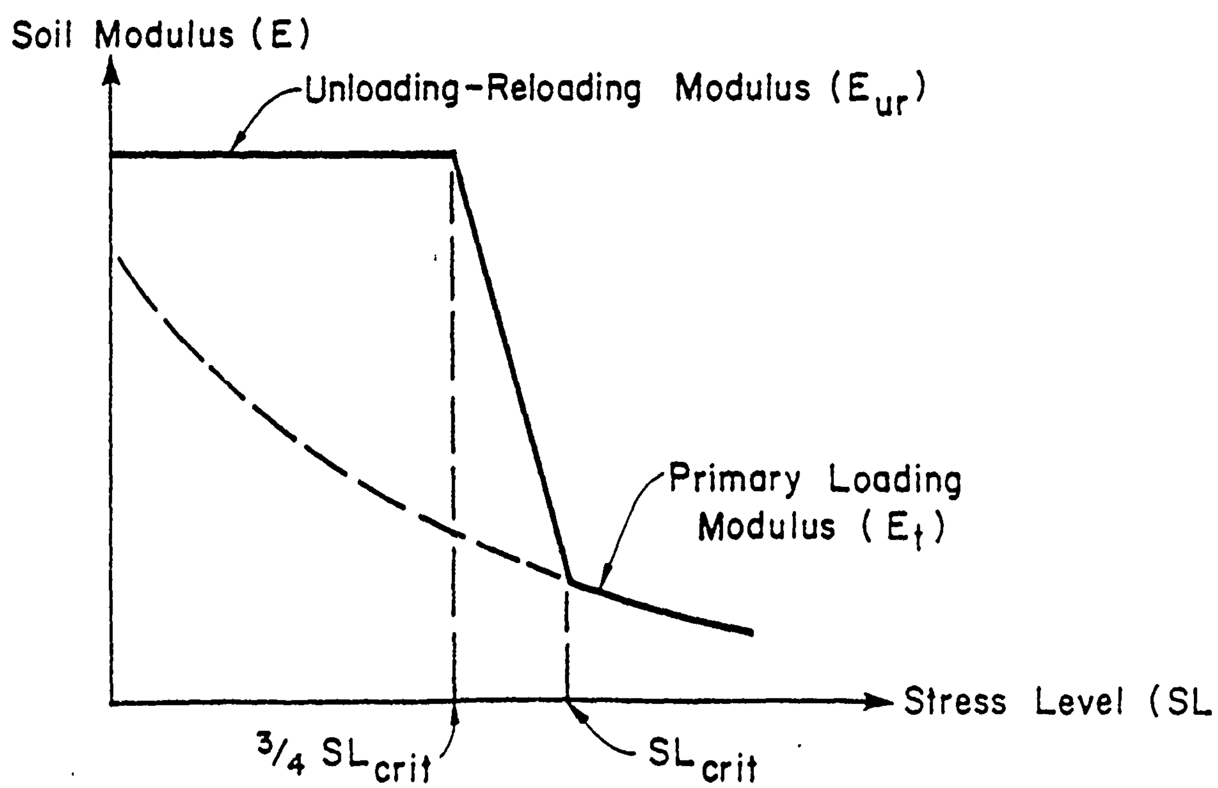
$$SS = SL \sqrt[4]{(\sigma_3/P_a)} \qquad (14)$$

where SL = Stress level = $(\sigma_1 - \sigma_3)/(\sigma_1 - \sigma_3)_f$, and

P_a = atmospheric pressure, introduced in order to allow taking the fourth power radical of a dimensionless number.



a) Previous Model for Unloading-Reloading Moduli



b) Proposed Model for Unloading-Reloading Moduli

FIG. 3.3 MODELLING UNLOADING-RELOADING MODULI WITHOUT INTRODUCING COMPUTATIONAL INSTABILITY

The new model assumes primary loading moduli (E_t) are appropriate when the current stress state is greater than or equal to the maximum previous stress state ($SS > SS_{max\ past}$), and otherwise assumes unloading-reloading moduli (E_{ur}). Based on this criteria, the critical stress level (SL_{crit}) above which primary loading behavior is assumed for a given current confining stress (σ_3) may be calculated as

$$SL_{crit} = \frac{SS_{max\ past}}{\sqrt[4]{\sigma_3/P_a}} \qquad (15)$$

Figure 3.2(b) illustrates the division between primary loading and unloading-reloading stress paths based on the new stress state criteria for the same initial conditions as were shown in Figure 3.2(a). The stress space is now divided by a line which is slightly concave downwards, and inclined slightly away from the constant stress level line.

The second, and most serious, problem with the previous model for unloading-reloading behavior is that it can lead to computational instability during incremental analyses. Figure 3.3(a) illustrates the soil moduli resulting from application of the unmodified 1980 model. At all stress levels greater than or equal to the maximum previous stress level ($SL_{max\ past}$) the primary loading modulus (E_t) is applied, and at all lower stress levels the unloading-reloading modulus (E_{ur}) is applies. The sharp discontinuity shown to occur in this figure at $SL_{max\ past}$ can result in a sudden change in modulus by a factor of more than 10 or 20 at this point. This can lead to computational instability during incremental finite element analyses, as soil elements incrementally subjected to loading at fairly constant stress levels may, as a

result of minor fluctuations in stress level, cross back and forth across the discontinuity experiencing large and unwarranted sudden changes in modulus. Attempts to minimize the impact of this source of potential computational instability by setting the boundary between primary loading and unloading-reloading at 0.95 $SL_{max\ past}$ were unsuccessful. ....(8)

In order to prevent this potential source of computational instability, the new model provides for a less abrupt transition between unloading-reloading and primary loading moduli as illustrated in Figure 3.3(b), and described below:

1. The transition from unloading-reloading to primary loading is based on the new stress state criteria as described previously. Knowing the stress state ($SS_{max\ past}$) which defines the boundary between primary loading and unloading-reloading behavior, the stress level (SL_{crit}) at which primary loading begins for a given confining stress (σ_3) can be determined using Eq. 15.
2. When $SL > SL_{crit}$, the primary loading modulus (E_t) as determined by Eq. 8 is used.
3. When $SL < 3/4\ SL_{crit}$, the unloading-reloading modulus (E_{ur}) as determined by Eq. 11 is used.
4. When $3/4\ SL_{crit} < SL < SL_{crit}$, the modulus used is derived by linear interpolation between E_{ur} at $3/4\ SL_{crit}$ and E_t at SL_{crit}, as shown in Figure 3.3(b).

This continuous linear transition between E_{ur} and E_t eliminates the sudden E_t/E_{ur} discontinuity, and thus reduces the associated

potential for computational instability inherent in the previous model. The price of this elimination of a source of computational instability is that the new model underestimates, to some extent, the soil modulus during the initial stages of the transition from primary loading to unloading behavior. This underestimation is, however, of much less significance than the previous instability. In addition, the new model (a) provides (correctly) for a modulus in the range $3/4\ SL_{crit} < SL < SL_{crit}$ which is significantly higher than E_t during both unloading and reloading, (b) provides an appropriate modulus (E_{ur}) in the range $SL < 3/4\ SL_{crit}$, (c) provides an appropriate modulus (E_t) in the range $SL > SL_{crit}$, and (d) provides an improved model for soil behavior during the transition from reloading to primary loading. ....(8)

The previous (1980) model had a tendency, under certain conditions, to underestimate the bulk modulus (B) and thus to underestimate minor principal stresses as well as soil strength and stiffness. This problem occurred most frequently in elements with very low stress levels and high confining stresses. In order to overcome tendency of the bulk modulus model to underestimate Poisson's ratio at low stress levels for some soils, the lower bound constraint on the new model has been modified such that

$$B_{min} > (E_t/3) \left\{ \frac{2 - \sin\phi}{\sin\phi} \right\} \qquad \text{for } \phi > 2.3° \qquad (16)$$

and

$$B_{min} = 17\ E_t \qquad \text{for } \phi < 2.3° \qquad (16a)$$

This supercedes the unmodified (1980) lower bound constraint of $B_{min} > E_t/3$ which constrained only against negative values of Poisson's ratio. When $\phi < 2.3°$, ν_t is thus set equal to 0.49, as is appropriate for a cohesive soil under undrained conditions. For $\phi > 2.3°$, this simple lower bound constraint on B has the effect of constraining Poisson's ratio be greater than or equal to ν_{min} where

$$\nu_{min} = \frac{1 - \sin\phi}{2 - \sin\phi} \qquad (17)$$

3.1.2 Analysis Procedure

The program FEADAM84 calculates the stresses, strains, and displacements in embankments, simulating the actual sequence of construction operations and post-construction loading conditions. The non-linear and stress dependent stress-strain properties of the soils are approximated by performing the analysis in increments.

An increment may consist of the placement of a new layer on the embankment, or of application of loads to a complete embankment. Each increment is analyzed twice (a two-iteration process), the first time using modulus values based on the stresses at the beginning of the increment, and the second time using modulus values based on the average stresses during the increment. The changes in stress, strain, and displacement calculated during the second iteration of each increment are added to the stresses, strains, and displacements at the beginning of the increment to give the total or cumulative values up to that stage of the analysis. ....(8)

During each increment, each element is checked to determine if it is in a state of primary loading, unloading/reloading, tensile failure, or shear failure, and is modelled accordingly as follows:

a) Primary Loading. Primary loading moduli are used when the stress state of an element is greater than the maximum previous stress state of the element, and the minor principal stress (σ_3) is positive. If σ_3 is positive but less than 0.05 times atmospheric pressure, the modulus values are computed using σ_3 equal to 0.05 atmospheric pressure. If no unloading-reloading elastic modulus number is specified for a given soil type, then all elements of that type are modelled with primary loading moduli regardless of stress state, unless the element is in a state of tensile or shear failure. ....(8)

b) Elastic Unloading. Unloading-reloading modulus values (E_{ur}) are used when the current stress state of an element falls below the previous maximum stress state. Linear elastic (stress-state-independent) materials may also be modelled using the program FEADAM84, and these are never considered to be in an unloading-reloading condition. ....(8)

c) Tensile Failure. Tensile failure occurs when σ_3 is negative. During the first iteration, the assigned bulk modulus (B) is computed using σ_3 equal to 0.1 times atmospheric pressure and the soil modulus (E) is set equal to one-tenth of the bulk modulus. If at the end of the first iteration the element is still undergoing tensile failure, both of the

moduli (E and B) are reduced to one-tenth of the values used in the first iteration. Linear elastic materials are not subject to tensile failure. ....(8)

d) Shear Failure. Shear failure occurs when the stress level of an element exceeds 95% of its shear strength. Modulus values are modelled using Equation 6, but corresponding to a condition where the product of stress level (SL) times the failure ration (R_f) equals 0.95, resulting in very low elastic moduli. Linear elastic materials are not subject to shear failure. ....(8)

3.1.3 Initial Analysis

FEADAM84, in its present form, is not capable of calculating internal forces and displacements of structural elements such as a geotextile placed in a roadway embankment. However, FEADAM84 is capable of modelling the failure mechanisms and stress distributions of existing roadway embankments constructed on permafrost. Analysis of geotextile reinforced roadway embankments will be accomplished with the use of SSTIPN obtained from Dr. J. M. Duncan at Virginia Tech. (See Appendix C)

3.1.3.1 Summary of Analysis. Two material properties can be specified within the FEADAM84 program: (1) a linear elastic material which is not subject to shear failure and which can take tension, and (2) a stress dependent non-linear elasto-plastic material which obeys the hyberpolic stress-strain and volumetric relationships described in Section 3.1.1.

Linear-elastic materials are not applicable to this analysis and will not be discussed. For the stress dependent, non-linear elasto-plastic soil materials, a total of nine parameters are required as summarized in Table 3.1.

Table 3.1 Summary of the Hyperbolic Parameters

Parameter	Name	Function
K, K_{ur}	Modulus number	Relate E_i and E_{ur} to σ_3
n	Modulus exponent	
c	Cohesion intercept	Relate $(\sigma_1-\sigma_3)_f$ to σ_3
ϕ, $\Delta\phi$	Friction angle parameters	
R_f	Failure ratio	Relates $(\sigma_1-\sigma_3)_{ult}$ to $(\sigma_1-\sigma_3)_f$
K_b	Bulk modulus number	Value of B/P_a at $\sigma_3 = P_a$
m	Bulk modulus exponent	Change in B/P_a for ten-fold increase in σ_3

All of these parameters can be evaluated from a series of triaxial compression tests. These procedures are described by Duncan and Wong (1974).

Three steps are required to accurately model the existing failure mode of the Farmer's Loop Road in Fairbanks, Alaska. First, the question of "What were the causes of roadway embankment failure?" must be answered. Second, an appropriate representation of the roadway embankment geometry including foundation soil must be defined. Third, an accurate representation of the roadway embankment performance through the selection of soil parameter values to be input into the program.

The failure mechanisms associated with roadway embankments overlying weak foundations have been described in Sections 1.1 and 2.2. The failure of the Farmer's Loop Road is directly related to the seasonal thawing of the frozen foundation soil underlying the side slopes of the embankment. This degradation can be further amplified by the insulating effect of snow over the sideslopes which prevents the complete freeze-back of the active layer (13). The consequential consolidation of the thaw unstable permafrost results in differential settlement of the roadway embankment showing up as longitudinal cracks along the wearing surface (13, 14), as shown in Figure 1.1.

The roadway embankment geometry selected for the numerical analyses (See Figure 3.4) is taken from the State of Alaska Department of Transportation and Public Facilities (DOT&PF) Typical Cross Section of Farmer's Loop Road (See Figure 3.5) and the Engineering Geology and Soils Report (1985). The actual roadway embankment geometry varies along the length of the road ana is a function of the amount of cut and fill, grade, and superelevation of curves. The geometry selected in the analysis represents a typical section along the road.

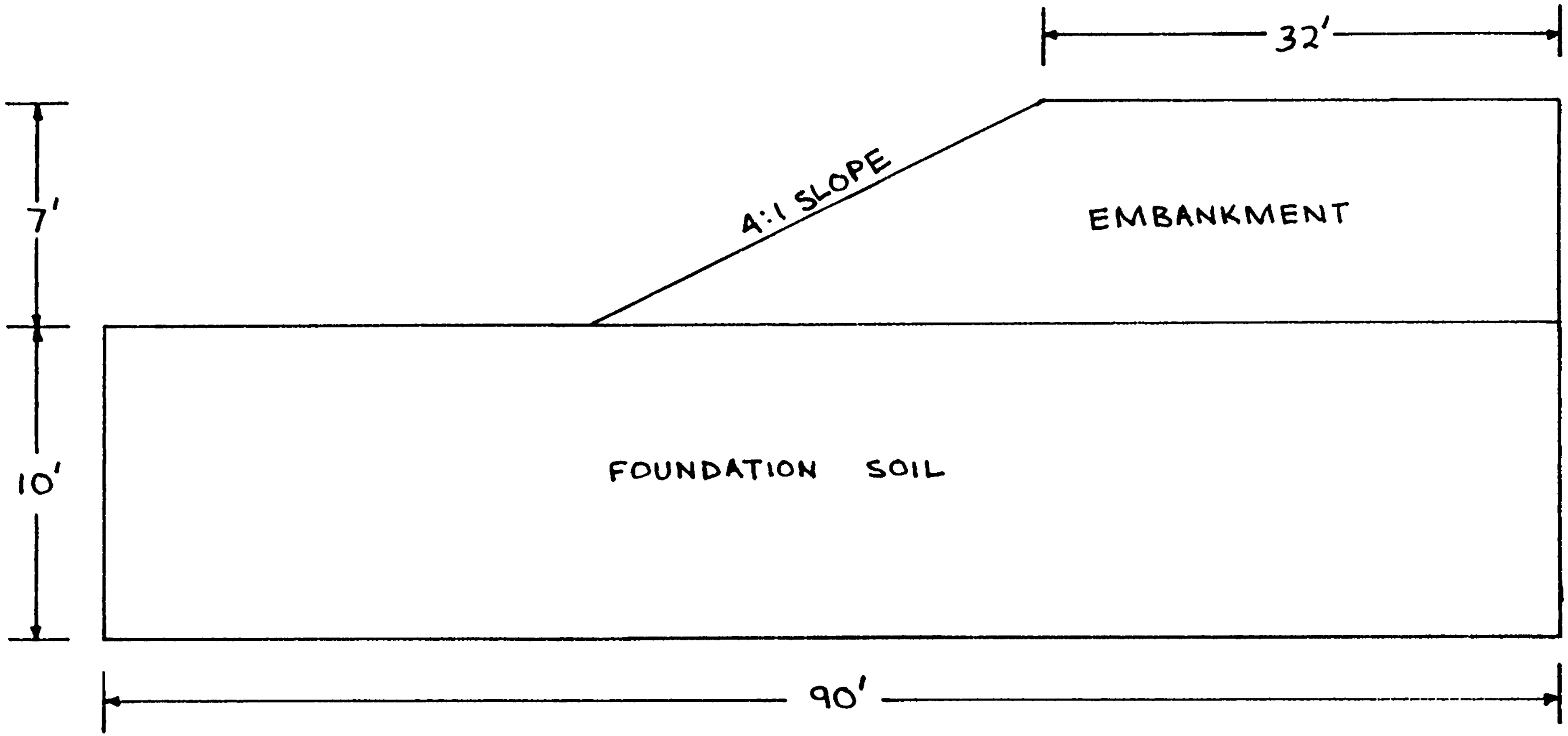
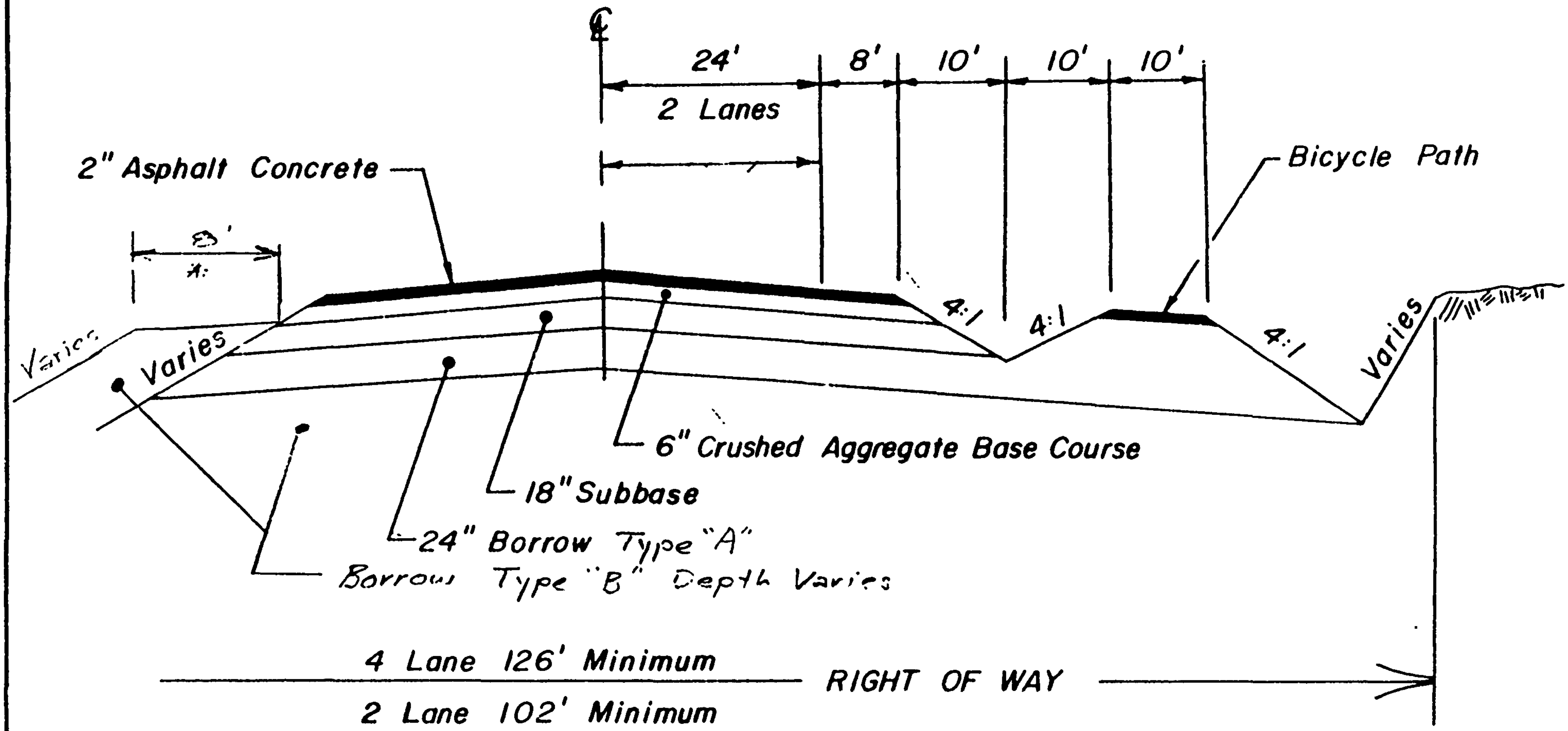


FIG. 3.4 EMBANKMENT GEOMETRY USED IN NUMERICAL ANALYSES



TYPICAL SECTION

Farmers Loop Road 0 to 8 Mile

RS - 0644 (13)

* Stabilizing Berm

FIG. 3.5

Modelling embankment performance is primarily dependent upon the proper selection of soil parameter values to be evaluated by the program. The soil parameters used in the hyperbolic model may be obtained from triaxial compression tests. Three soil types are used in modelling embankment performance in both FEADAM84 and SSTIPN. The roadway embankment is modelled as one type for convenient use in the program. Permafrost and thaw-unstable permafrost parametric values are estimated from Duncan et al. (1974) due to insufficient availability of test data on these types of soil materials. Since actual data are not available for the thaw-ustable permafrost, the objective is to obtain relative strength data for the three soil types used to model existing conditions. The three soil types modelled are crushed rock for the embankment, soft clay for the thaw unstable permafrost, and hard clay for the permafrost. The parametric values obtained for the crushed rock were obtained from Schauz (1981). The data obtained for soft and hard clay were obtained from Duncan et al. (1974). The values obtained for all three soil types are summarized in Table 3.2.

Table 3.2 Soil Parametric Values Used in FEADAM84 and SSTIPN

Parameter	Crushed Rock	Soft Clay	Hard Clay
K	6000.0	40.0	1000.0
K_{ur}	8000.0	80.0	1500.0
n	0.5	0.3	0.4
R_f	0.5	0.9	0.7
K_b	1500.0	20.0	500.0
m	0.6	0.2	0.5
c	0 psf	100 psf	1000 psf
ϕ	35°	0°	40°
$\Delta\phi$	0°	0°	0°
γ	135 pcf	106 pcf	120 pcf
K_o	0.5	0.5	0.5

The relative locations of the soil types and mesh used in the finite element analysis are shown in Figure 3.6. Location of the talik zone used in the analyses is consistent with data obtained by the State of Alaska DOT&PF (13, 14, 19). For most cases reasonably accurate results can be achieved by using eight or more layers in the mesh, and adding one layer at a time to the embankment. However, six layers were used to investigate the relative accuracy of the model with that of Figure 1.1. Six layers also allowed more flexibility in areas which required some refinement (See Figure 3.7). Figure 3.8 represents the deformed state of the original model. The failure mode associated with the Farmer's Loop Road can be detected in Figure 3.8. The deformed geometry plot is performed using Program GRAPH (See Appendix D). The consolidation of talik zone and severe surface deformation of the top of the embankment are clear. Through analysis of this figure, the material properties are reasonably accurate for further use in SSTIPN.

3.2 SSTIPN Analysis

SSTIPN calculates stresses, strain and displacements in soil elements and internal forces and displacements in structural elements by means of analyses which simulate the actual sequence of construction. The non-linear and stress-dependent stress-strain properties of the soils are approximated using the procedures developed by Kulhawy, Duncan, and Seed (1969). The structural materials are assumed to behave linearly. The soil model used is predecessor to the existing soil model used in FEADAM84. The purpose of utilizing SSTIPN is to analyze the effects of placing different structural materials within a

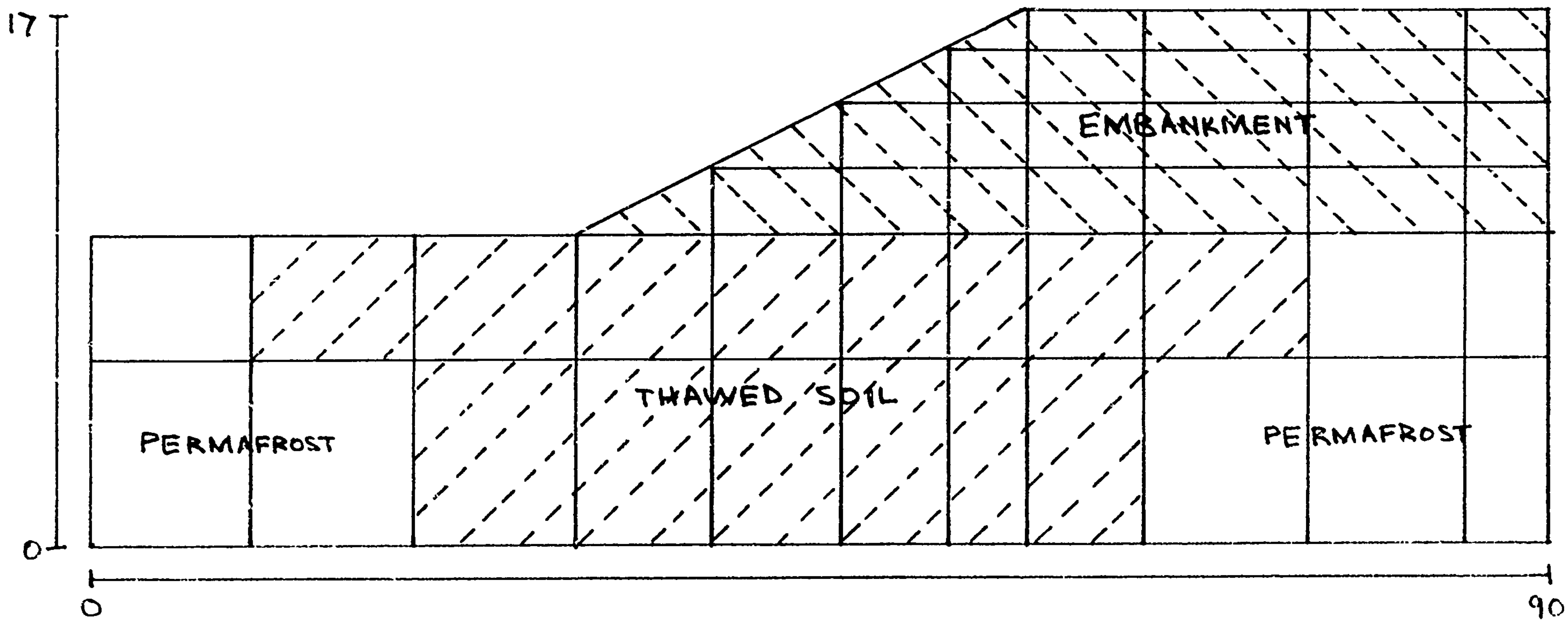


FIG. 3.6 FEADAM84 EMBANKMENT MODEL

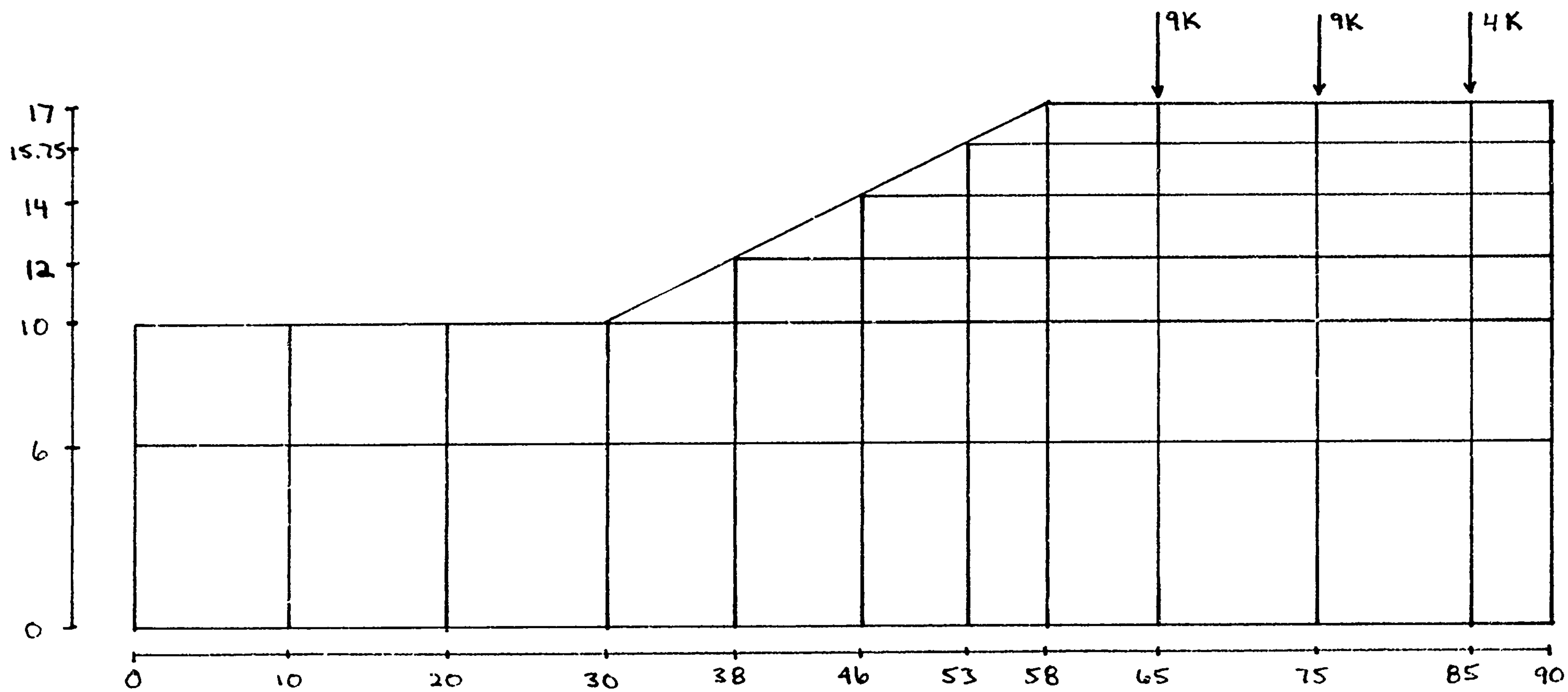


FIG. 3.7 FEADAM84 EMBANKMENT GEOMETRY

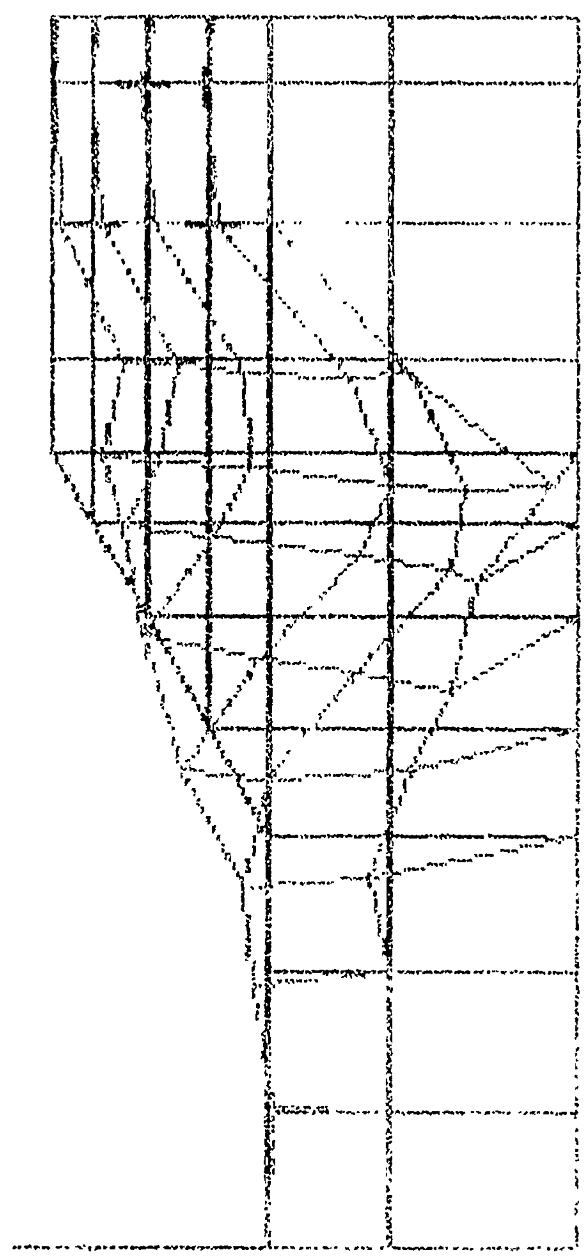


FIG. 3.8 DEFORMED EMBANKMENT GEOMETRY OF FEADAM84 ANALYSIS

roadway embankment constructed on permafrost.

3.2.1 Assumptions

The results of FEADAM84 reveal some important points. First, the soil parameters selected for the analyses are appropriate and accurately model roadway embankment performance in permafrost regions. The deformed roadway embankment model, Figure 3.8, depicts the distressed condition as a result of thaw-unstable foundation soil located beneath the side slopes of the embankment. Second, the geometry and location of the soil types are relatively accurate within the model. The relative location of the soil material properties, Figure 3.6, allows the roadway embankment model to behave consistently with DOT & PF articles (9, 21).

The conditions of the SSTIPN analyses are as follows:

1. Embankment geometry is identical to both STABGM and FEADAM84 analyses. Foundation soil height = 10 feet. Embankment soil height = 7 feet. Total number of soil elements if increased from 48 to 78 elements.
2. Five different strength modulae are analyzed for the geotextile properties. In addition, five different conditions are analyzed for each separate geotextile strength modulus.
3. Soil/geotextile interface is modelled for no slip between soil elements and structural elements.

Figure 3.9 depicts the mesh that is used in the SSTIPN analyses. The foundation and embankment numbers of layers are increased to three

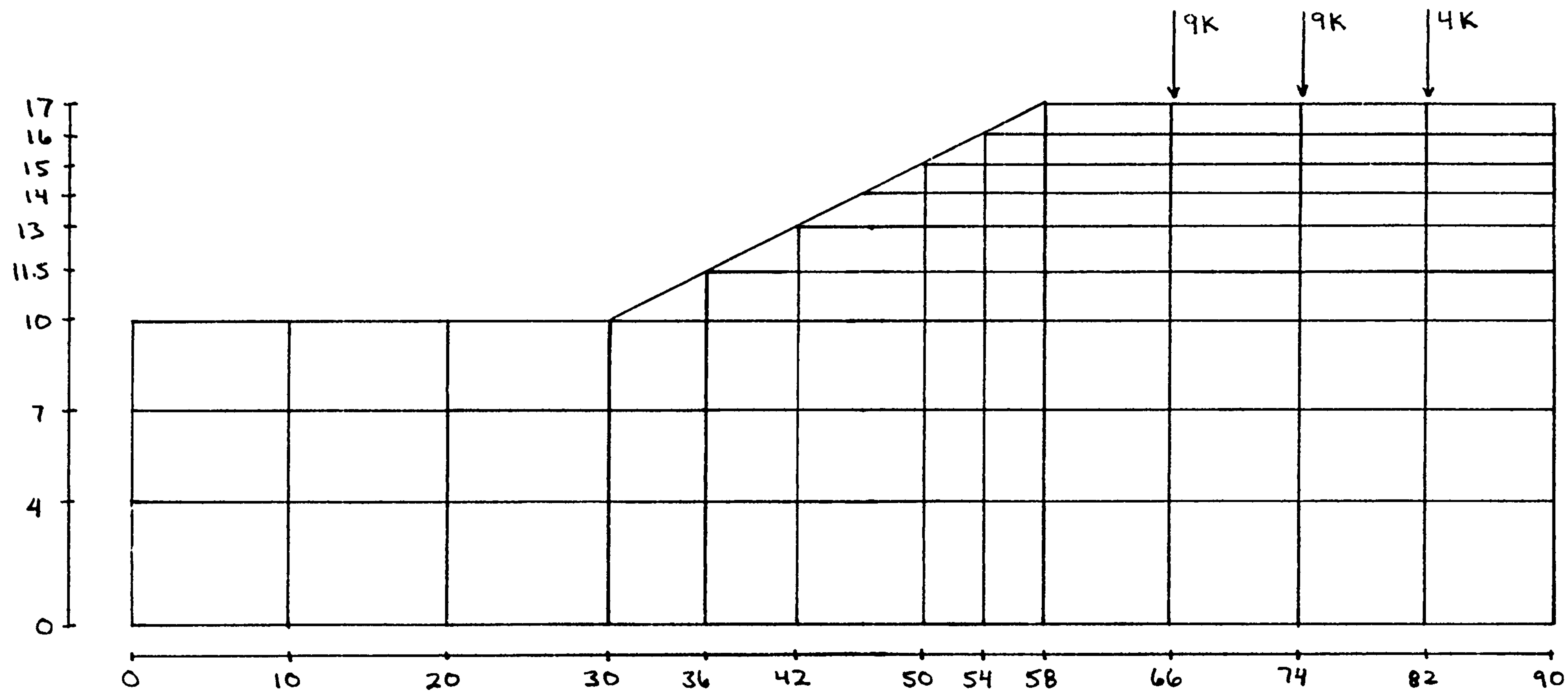


FIG. 3.9 SSTIPN EMBANKMENT GEOMETRY

and six, respectively to provide more accurate results of displacements and stresses. Figure 3.10 depicts the location of the three soil material types in the analyses. The location of the thaw-unstable material beneath the side slopes is consistent with articles from the state of Alaska DOT&PF (9, 15, 21).

The five geotextile strength modulus are displayed in Figure 3.11. Tensile strengths of 1000, 2000, and 4000 pounds per inch with strains of 5 and 20 percent are evaluated. SSTIPN does not differentiate between modulae with different strain. SSTIPN calculates the stiffness of each member in force per unit width without consideration to percent elongation. Therefore, a material with strength of 1000 pounds per inch at 5 percent strain is identical to a material with a strength of 4000 pounds per inch at 20 percent strain.

The five conditions analyzed for each strength modulae are as follows:

1. Three layers of geotextile are located within the embankment. The first layer located at the embankment/foundation interface and the second and third layers located three and five feet above the embankment/foundation interface, respectively.
2. Three layers of geotextile with identical locations as the first condition with a pre-tension of 1000 pounds per foot on all three layers.
3. One layer of geotextile located at the embankment/foundation interface.
4. One layer of geotextile located at the embankment/foundation

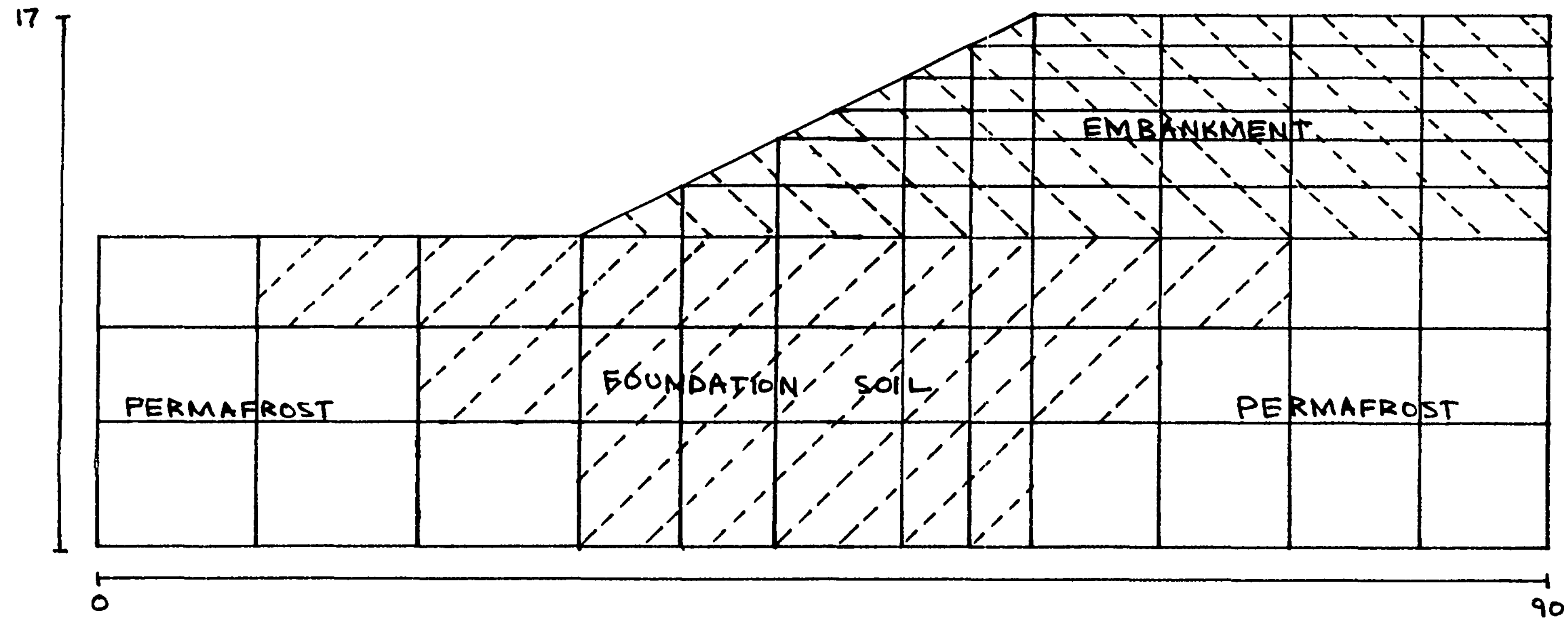
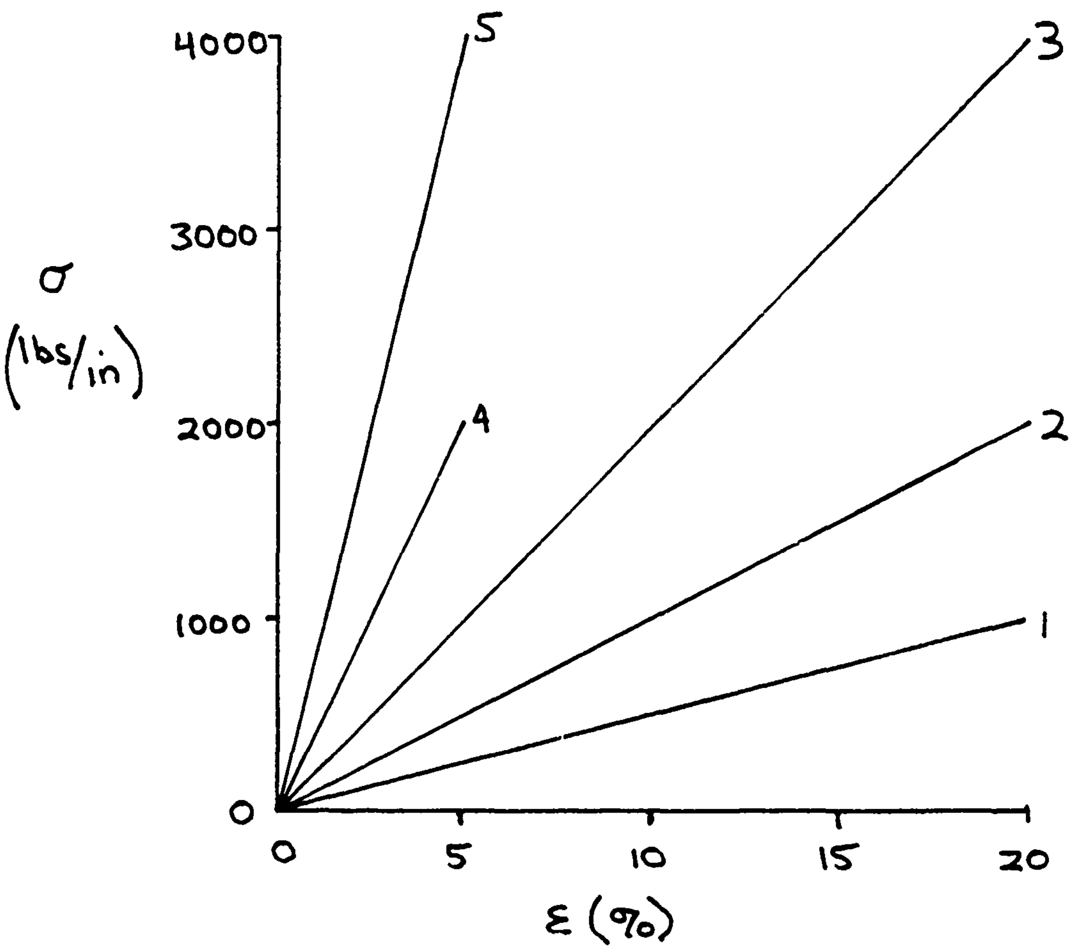


FIG. 3.10 SSTIPN EMBANKMENT MODEL



MODULUS	LOAD (σ) (lb/in)	STRAIN (ε) (%)	STIFFNESS (lbs/ft of width)	(TONS/ft of width)
1	1000	20	60,000	30
2	2000	20	120,000	60
3	4000	20	240,000	120
4	2000	5	480,000	240
5	4000	5	960,000	480

$$\text{STIFFNESS} = \frac{(1000\ \text{lb/in})(12\ \text{in/ft})}{(.01)(20\%)} = 60{,}000\ \text{lbs/ft of width}$$

FIG. 3.11 GEOTEXTILE STRENGTH MODULAE

interface with a pre-tension of 1000 pounds per foot.

5. One layer of geotextile located at the embankment/foundation interface with a pre-tension of 1000 pounds per foot. The geotextile extends 10 feet beyond the toe of the embankment. SSTIPN has the capability of modelling friction between soil and structural elements. The geotextile/soil interface is modelled with total friction, i.e., no slip between the soil and geotextile. The overall accuracy increases only by about 5 percent with the addition of friction elements. Modelling without friction elements is convenient for repetitive analyses and does not reduce the accuracy enough to cause a significant difference.

3.2.2 Results of SSTIPN Analysis

The analysis of SSTIPN results includes obtaining displacement and stress data from the output to evaluate the effect of each different modulae given the different conditions. The analysis of the roadway embankment with three layers of geotextile did not provide reliable results due to instability of SSTPIN in calculating displacements. Therefore, analyses of the five modulae with the first two conditions mentioned will no longer be discussed.

Displacement data extracted from SSTIPN output for all five different strength modulae with the last three conditions are plotted using the GRAPH in Appendix D. Figures 3.12 through 3.27 depict the deformed geometry for each case. Figures 3.28 through 3.43 the deviatoric stress distribution for the identical conditions used to plot the deformed geometry.

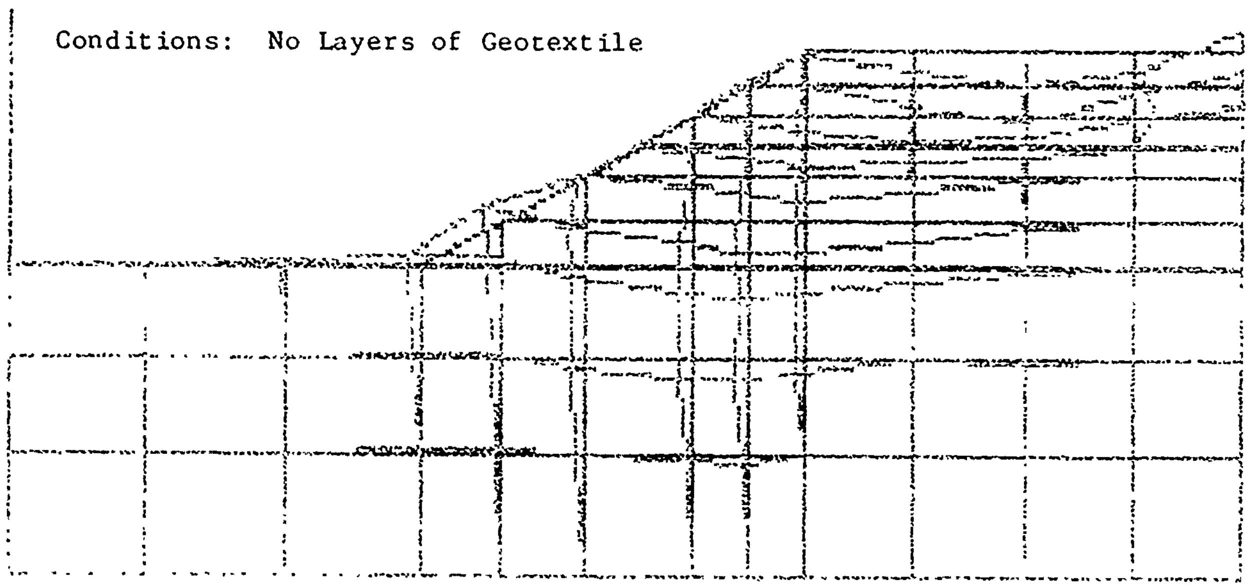


FIG. 3.12 DEFORMED EMBANKMENT GEOMETRY OF SSTIPN ANALYSIS

Conditions: 1 Layer of Geotextile
No Pre-tension
Geotextile Strengtn: 1000 lbs/in @ ε = 20%

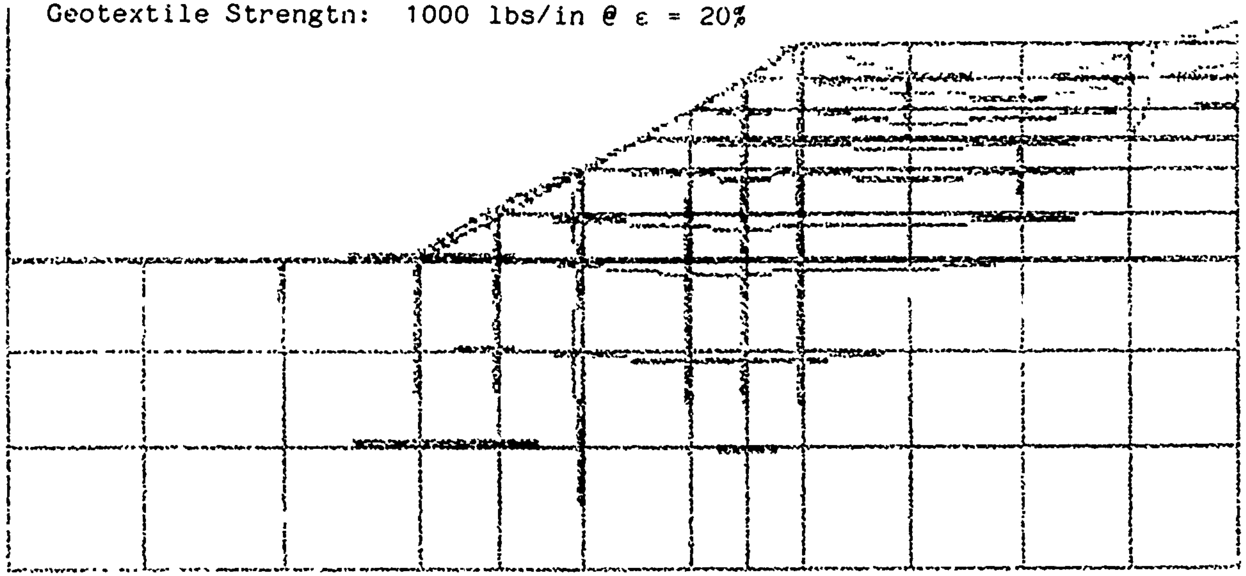


FIG. 3.13 DEFORMED EMBANKMENT GEOMETRY OF SSTIPN ANALYSIS

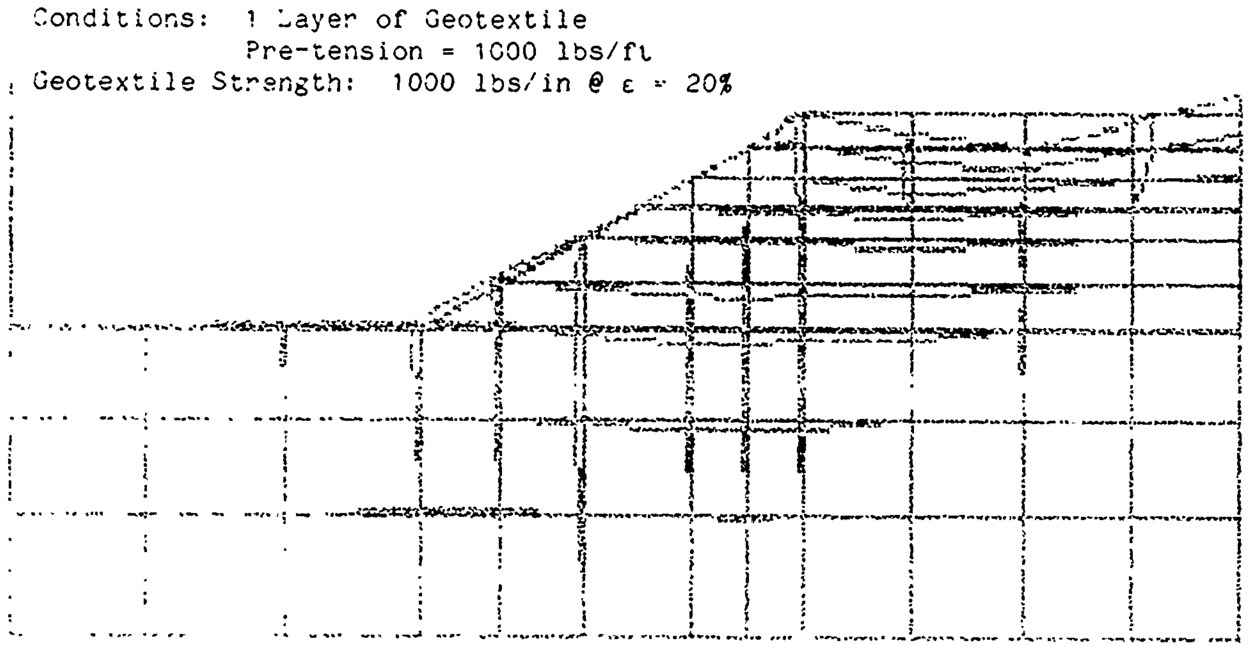


FIG. 3.14 DEFORMED EMBANKMENT GEOMETRY OF SSTIPN ANALYSIS

Conditions: 1 Layer of Geotextile Extended 10 Ft
Beyond Toe of Embankment
Pre-tension = 1000 lbs/ft
Geotextile Strength: 1000 lbs/in @ ε = 20%

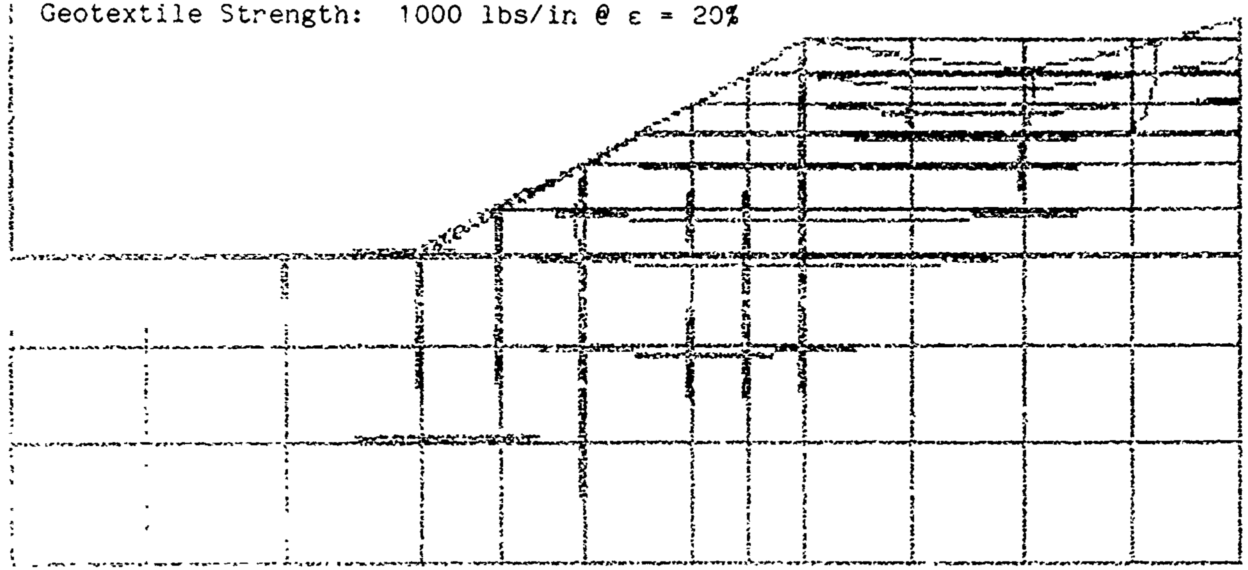


FIG. 3.15 DEFORMED EMBANKMENT GEOMETRY OF SSTIPN ANALYSIS

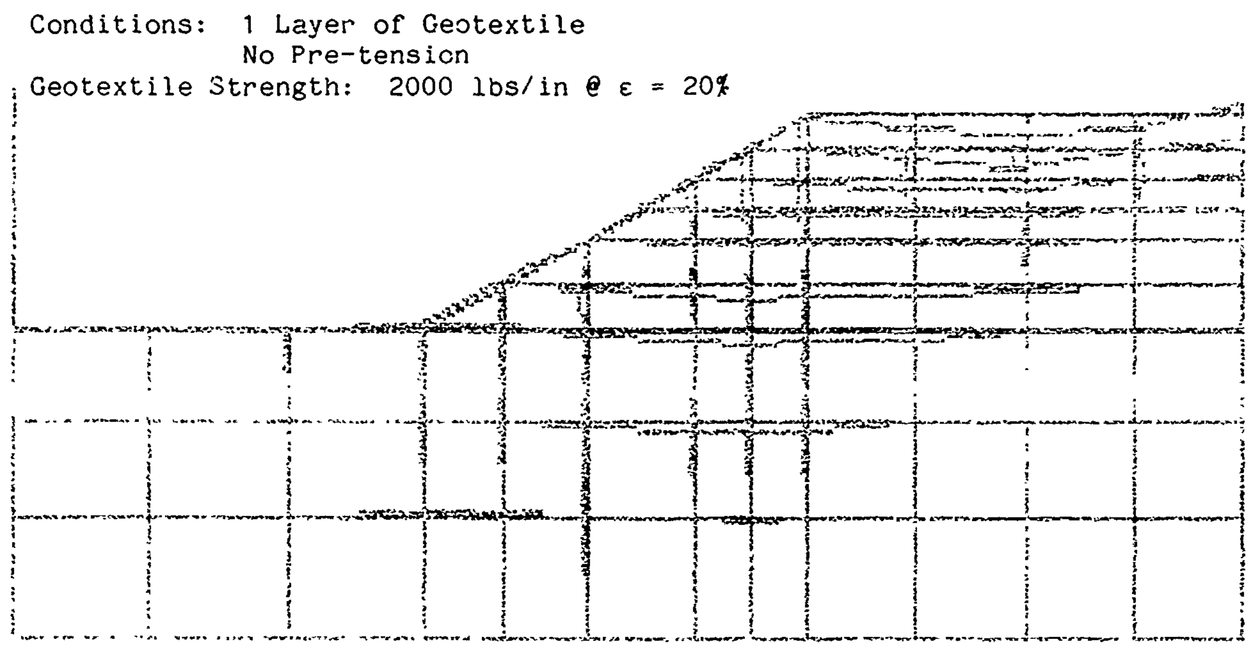


FIG. 3.16 DEFORMED EMBANKMENT GEOMETRY OF SSTIPN ANALYSIS

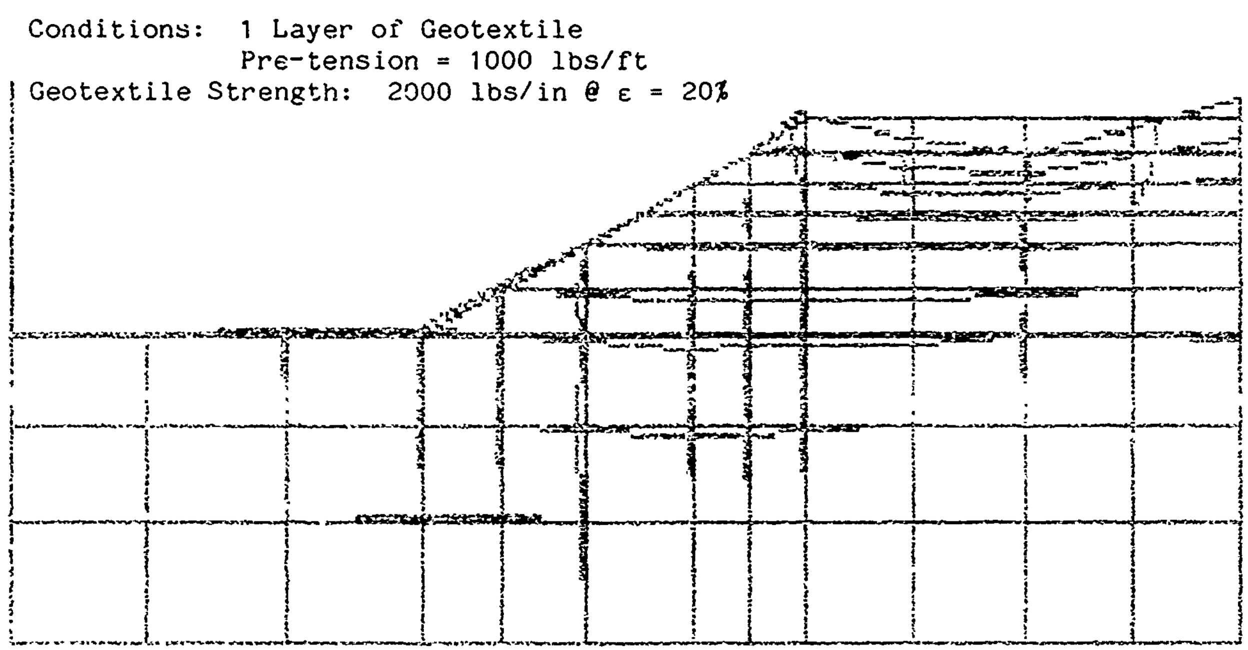


FIG. 3.17 DEFORMED EMBANKMENT GEOMETRY OF SSTIPN ANALYSIS

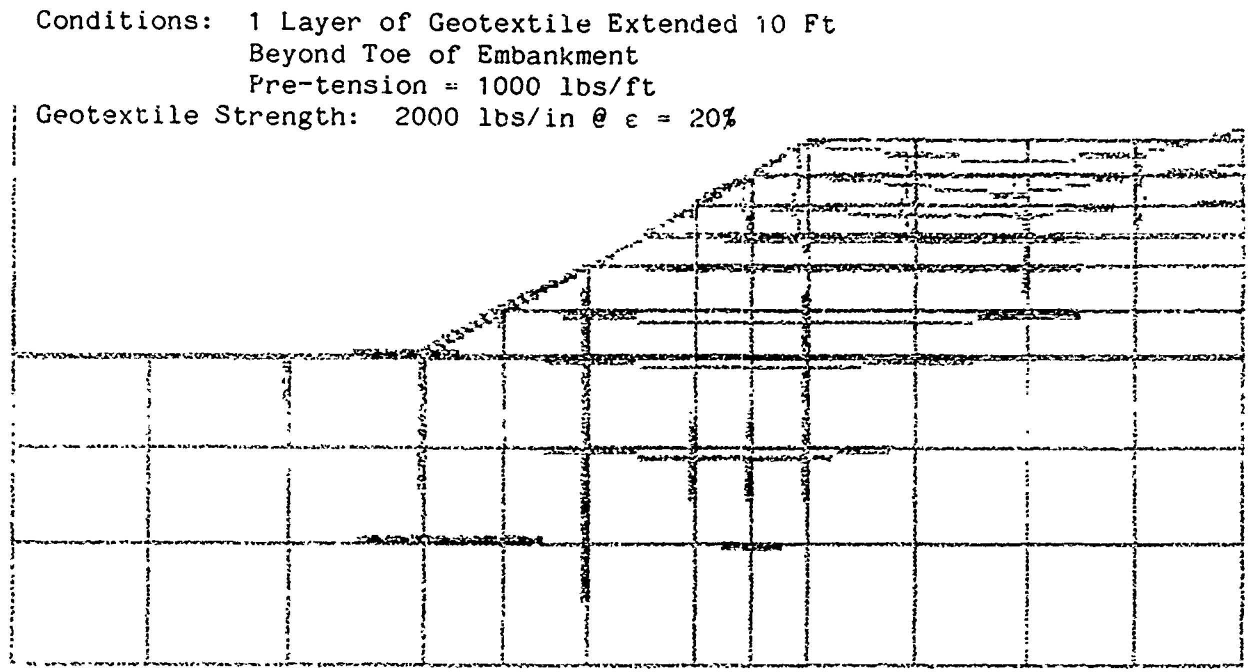


FIG. 3.18 DEFORMED EMBANKMENT GEOMETRY OF SSTIPN ANALYSIS

Conditions: 1 Layer of Geotextile
No Pre-tension
Geotextile Strength: 2000 lbs/in @ ϵ = 5%

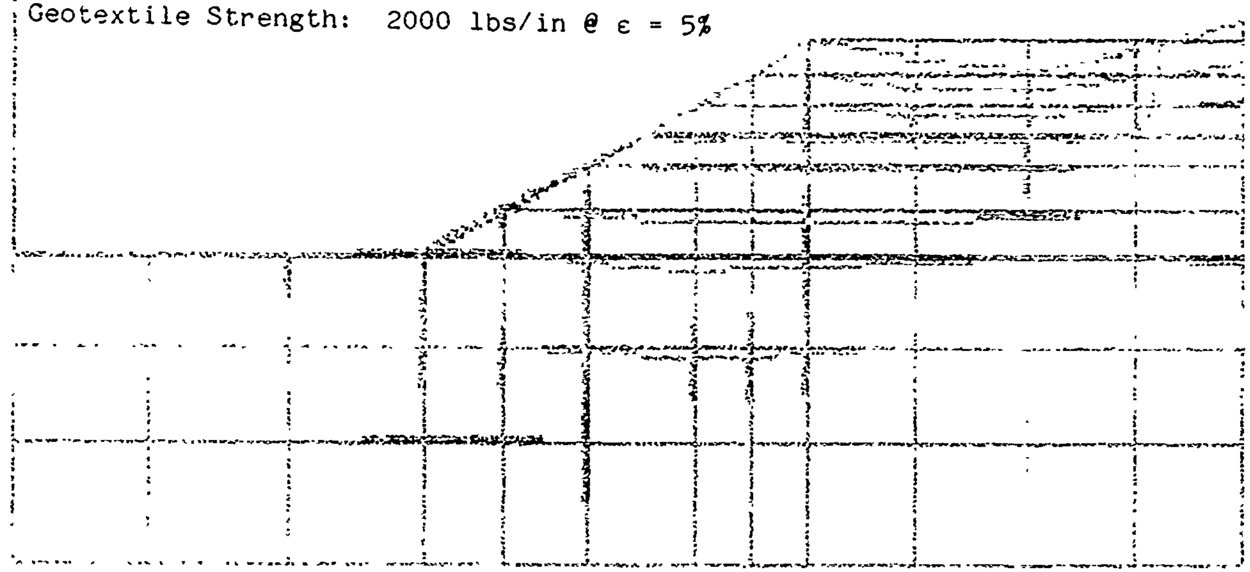


FIG. 3.19 DEFORMED EMBANKMENT GEOMETRY OF SSTIPN ANALYSIS

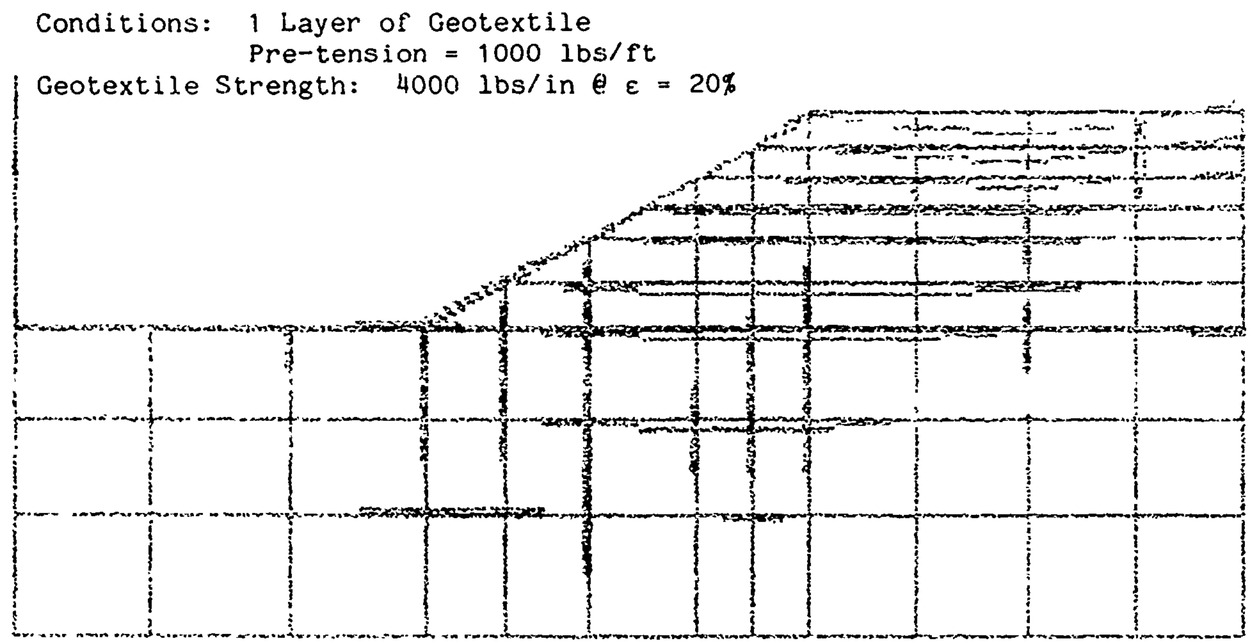


FIG. 3.20 DEFORMED EMBANKMENT GEOMETRY OF SSTIPN ANALYSIS

Conditions: 1 Layer of Geotextile Extended 10 Ft
Beyond Toe of Embankment
Pre-tension = 1000 lbs/ft
Geotextile Strength: 4000 lbs/in @ ε = 20%

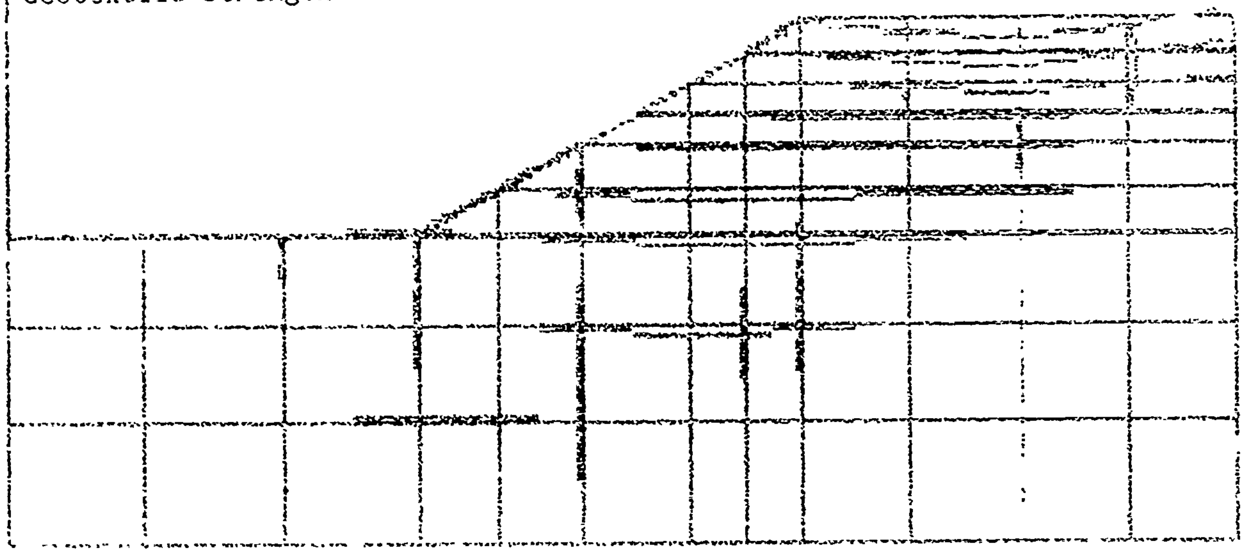


FIG. 3.21 DEFORMED EMBANKMENT GEOMETRY OF SSTIPN ANALYSIS

Conditions: 1 Layer of Geotextile
No Pre-tension
Geotextile Strength: 4000 lbs/in @ ε = 20%

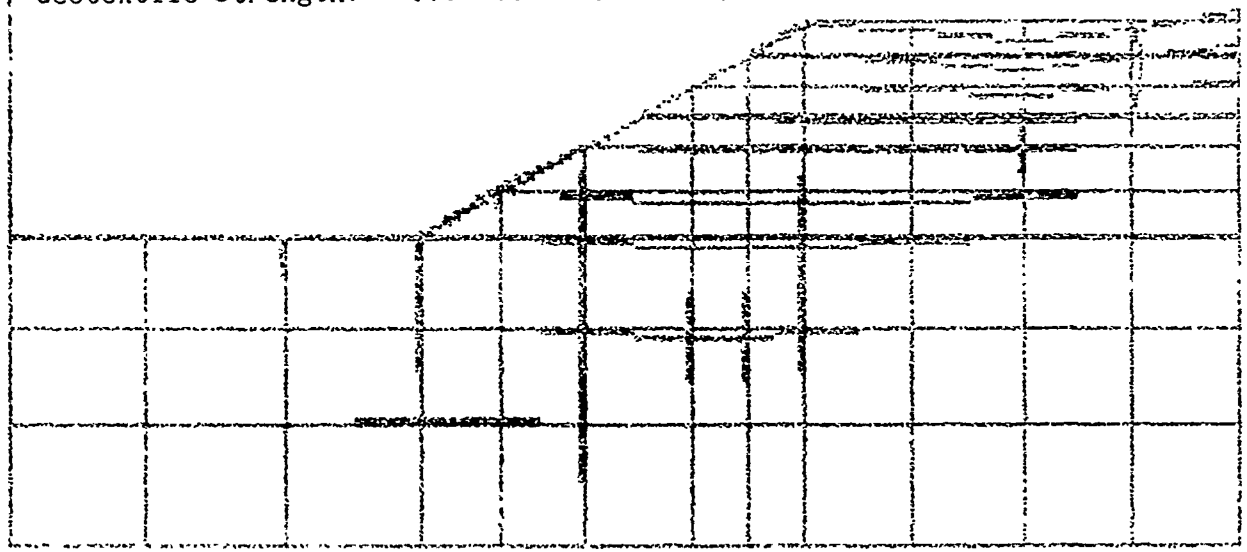


FIG. 3.22 DEFORMED EMBANKMENT GEOMETRY OF SSTIPN ANALYSIS

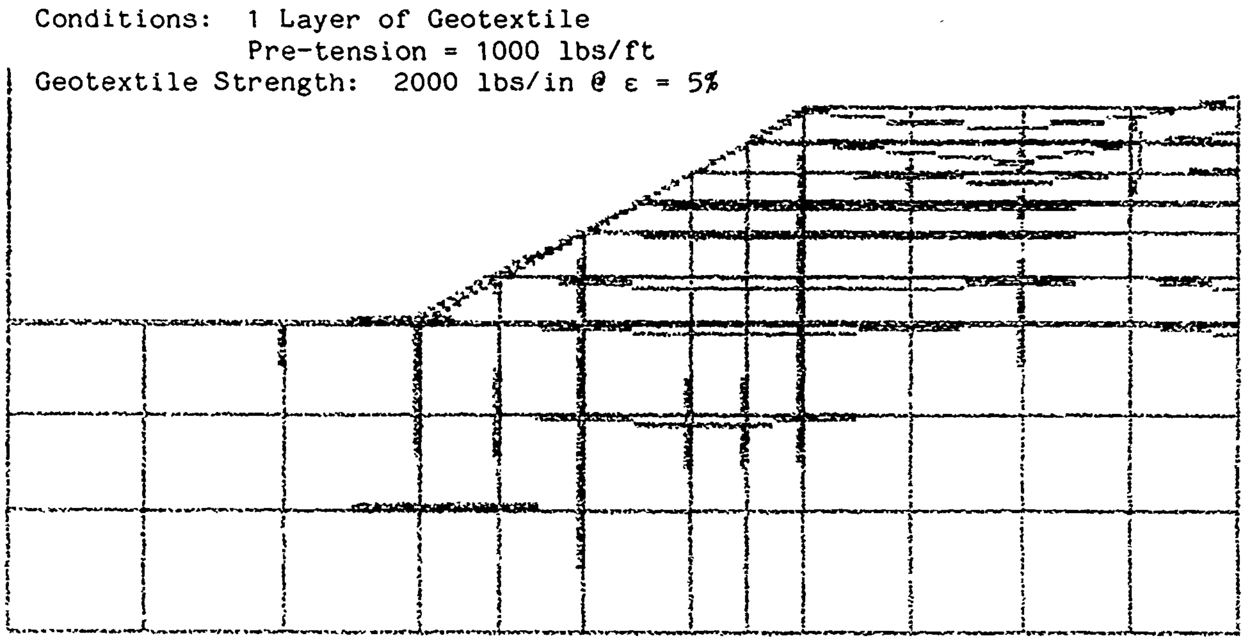


FIG. 3.23 DEFORMED EMBANKMENT GEOMETRY OF SSTIPN ANALYSIS

Conditions: 1 Layer of Geotextile Extended 10 Ft
Beyond Toe of Embankment
Geotextile Strength: 2000 lbs/in @ ε = 5%

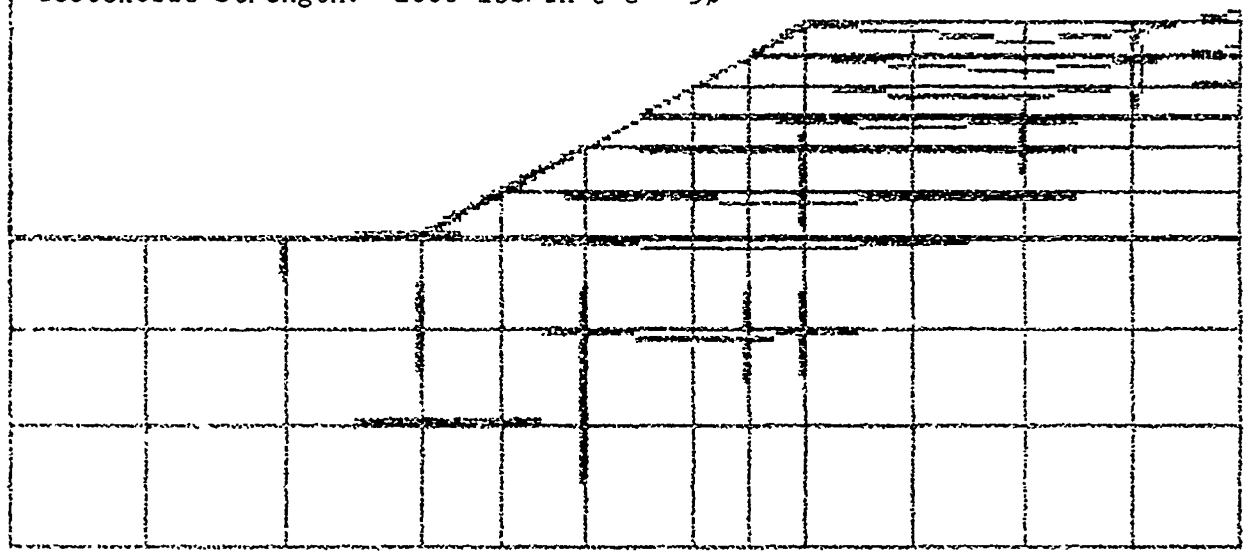


FIG. 3.24 DEFORMED EMBANKMENT GEOMETRY OF SSTIPN ANALYSIS

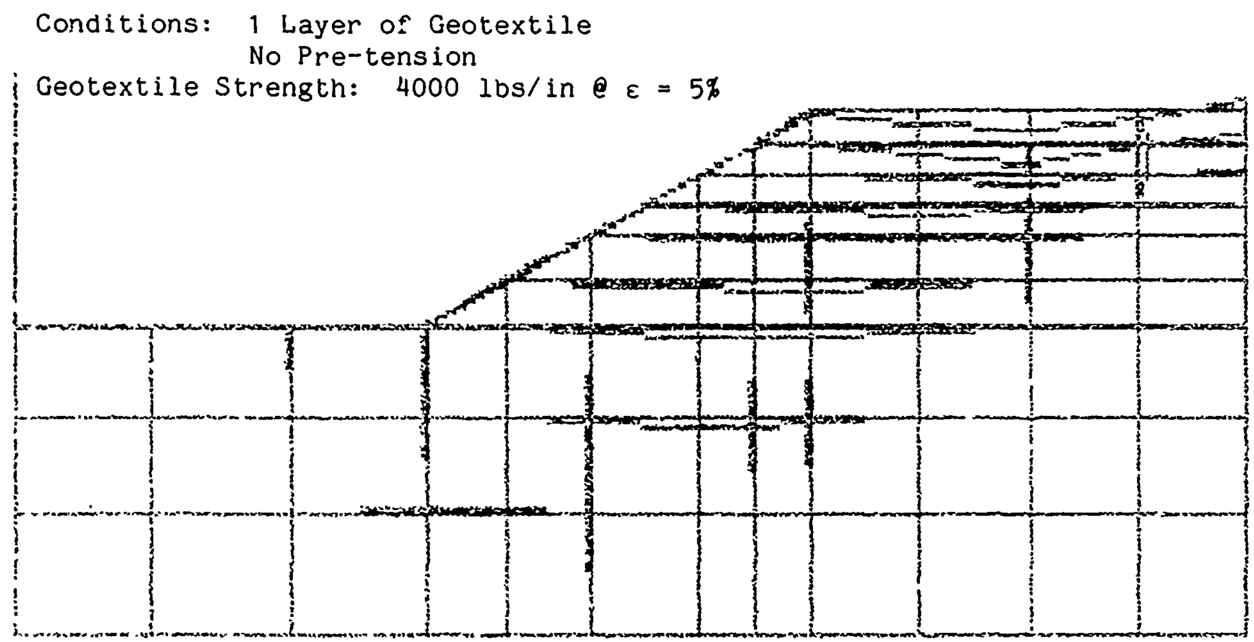


FIG. 3.25 DEFORMED EMBANKMENT GEOMETRY OF SSTIPN ANALYSIS

Conditions: 1 Layer of Geotextile
Pre-tension = 1000 lbs/ft
Geotextile Strength: 4000 lbs/in @ ε = 5%

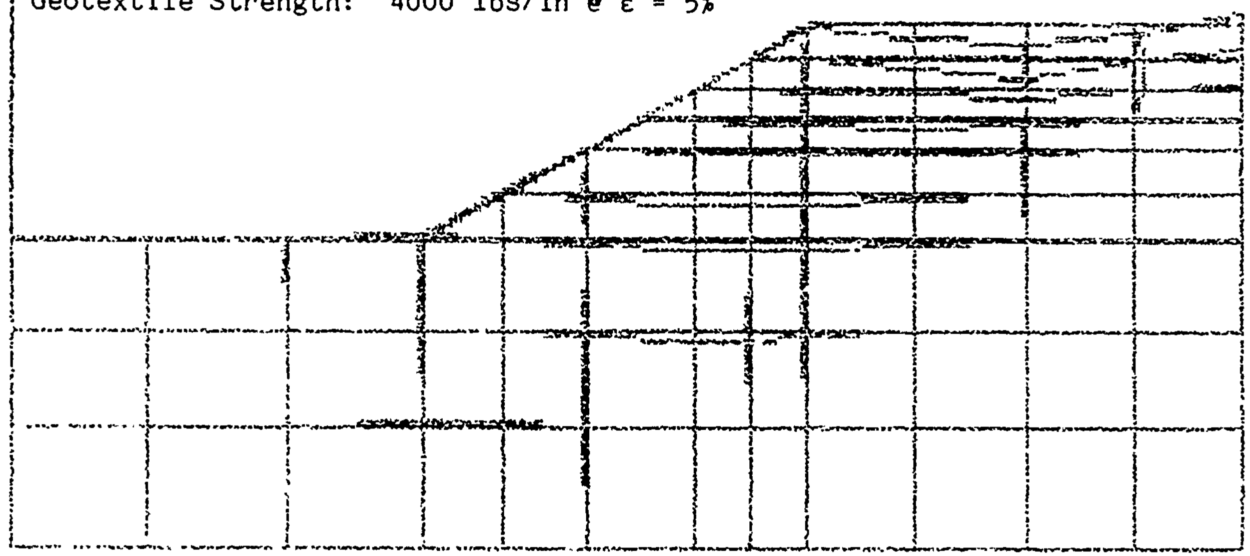


FIG. 3.26 DEFORMED EMBANKMENT GEOMETRY OF SSTIPN ANALYSIS

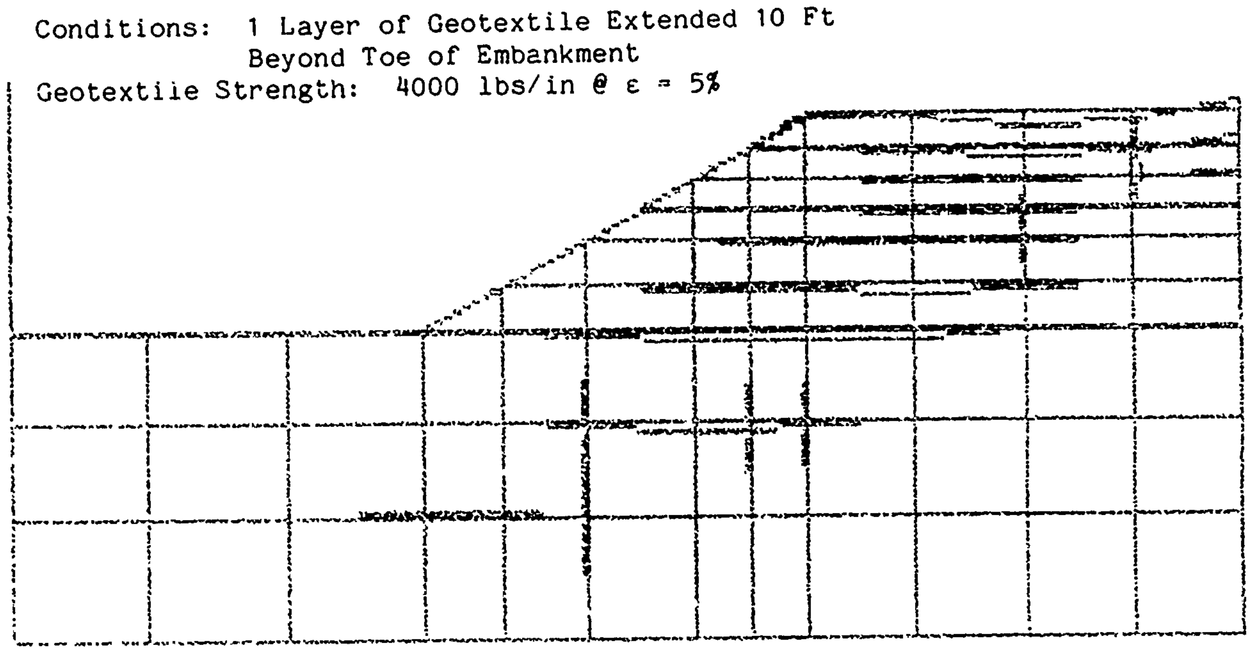


FIG. 3.27 DEFORMED EMBANKMENT GEOMETRY OF SSTIPN ANALYSIS

Conditions: No Layers of Geotextile

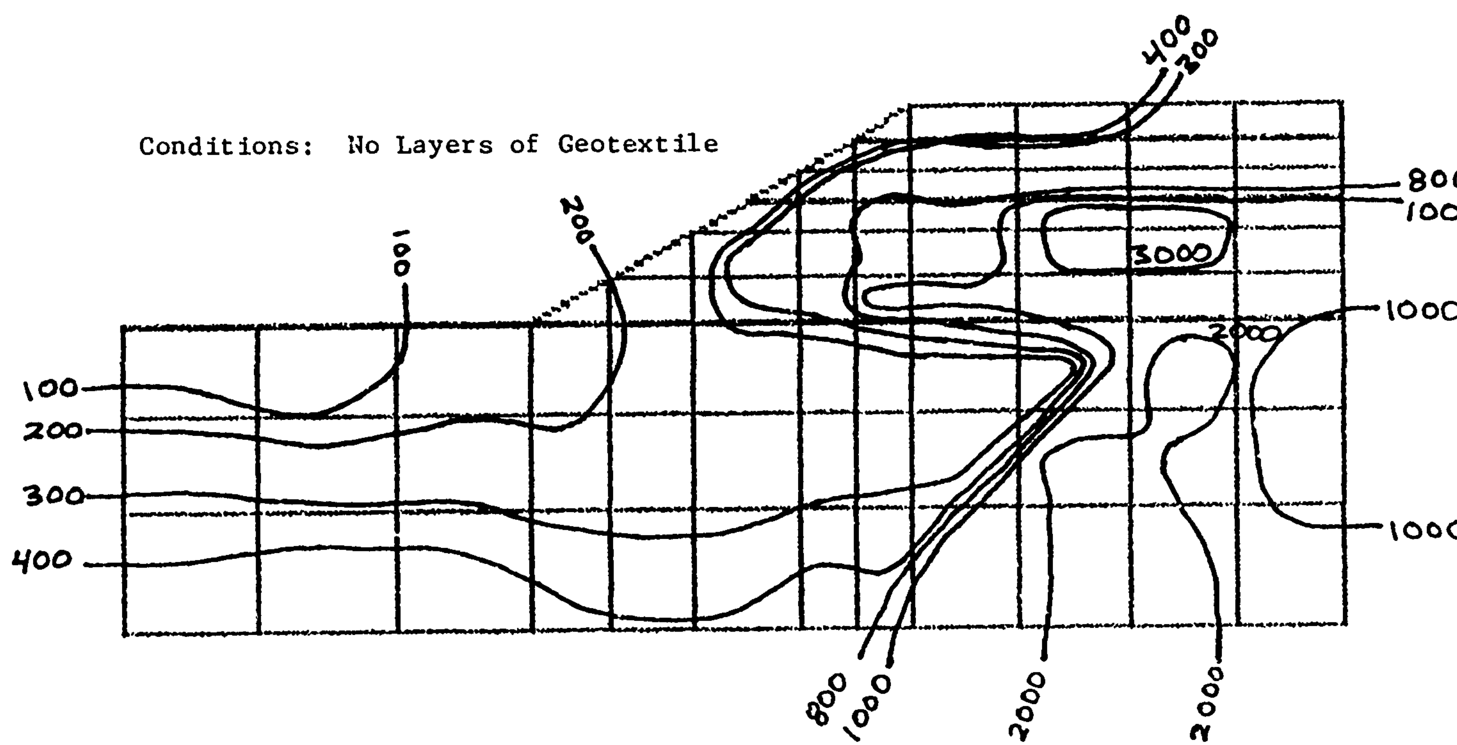


FIG. 3.28 DEVIATORIC STRESS CONTOUR OF SSTIPN ANALYSIS

Conditions: 1 Layer of Geotextile
No Pre-tension
Geotextile Strength: 1000 lbs/in @ ε = 20%

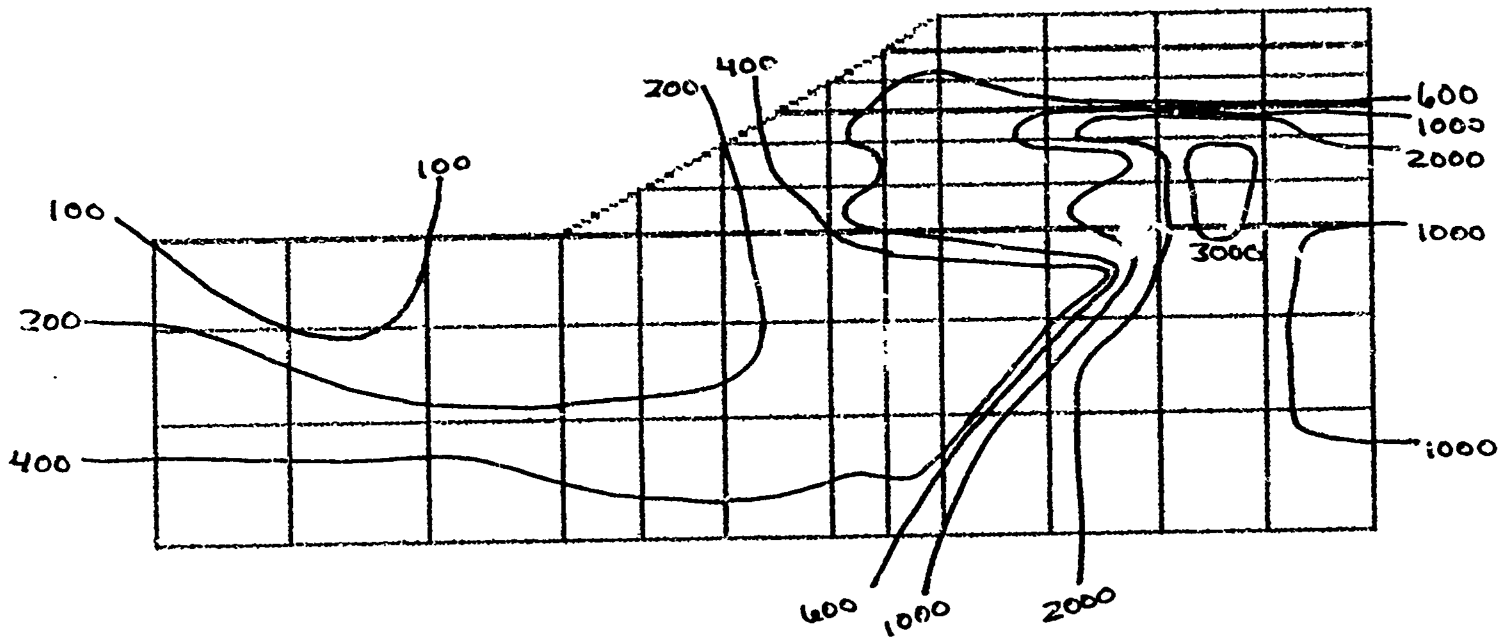


FIG. 3.29 DEVIATORIC STRESS CONTOUR OF SSTIPN ANALYSIS

Condition: 1 Layer of Geotextile
Pre-tension = 1000 lbs/ft
Geotextile Strength: 1000 lbs/in @ ε = 20%

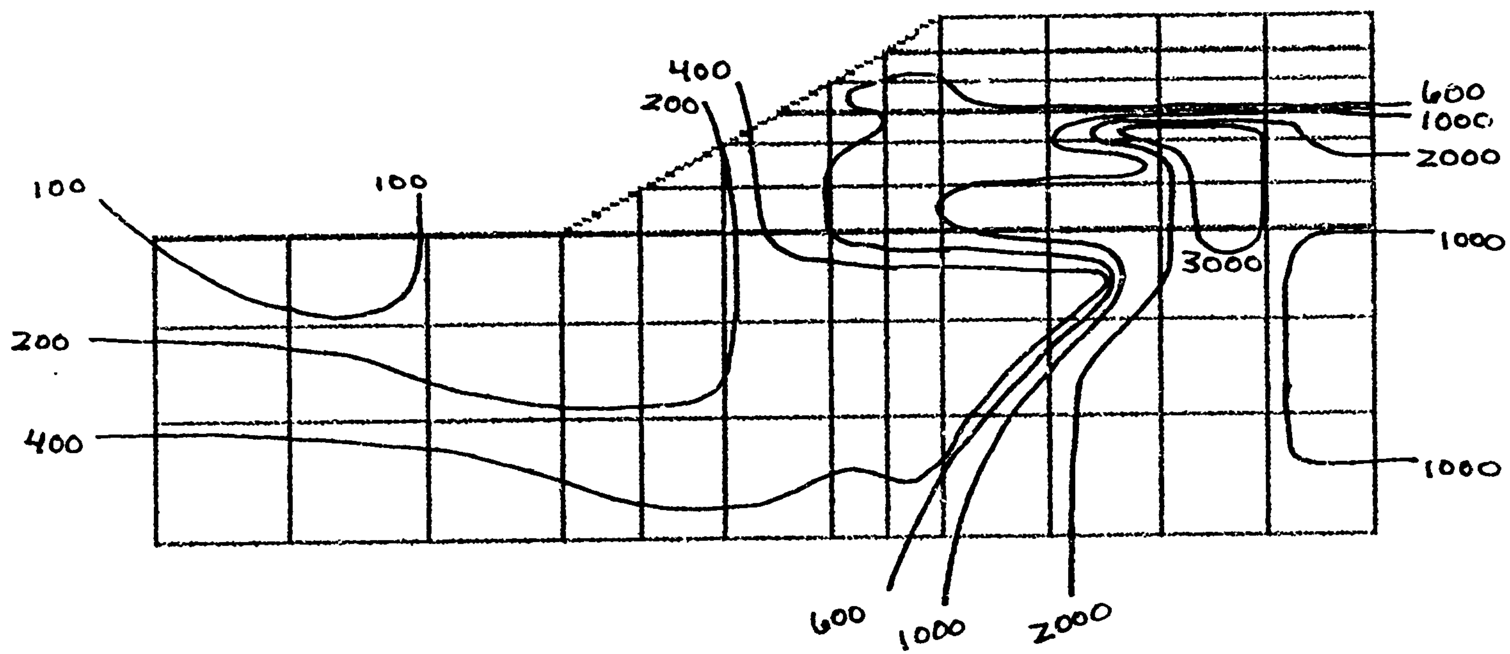


FIG. 3.30 DEVIATORIC STRESS CONTOUR OF SSTIPN ANALYSIS

Conditions: 1 Layer of Geotextile Extended
10 ft Beyond Toe of Embankment
Pre-tension = 1000 lbs/ft
Geotextile Strength: 1000 lbs/in @ ε = 20%

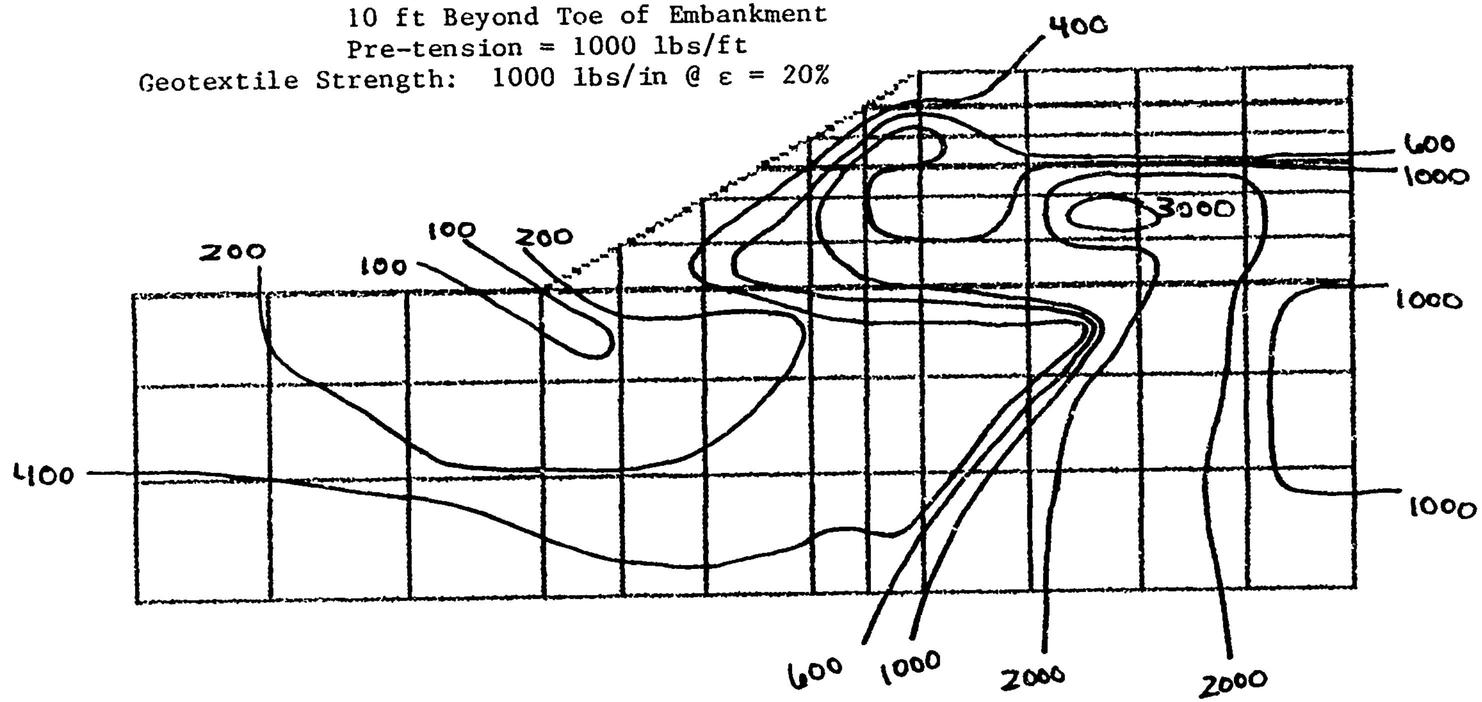


FIG. 3.31 DEVIATORIC STRESS CONTOUR OF SSTIPN ANALYSIS

Conditions: 1 Layer of Geotextile
No Pre-tension
Geotextile Strength: 2000 lbs/in @ ε = 20%

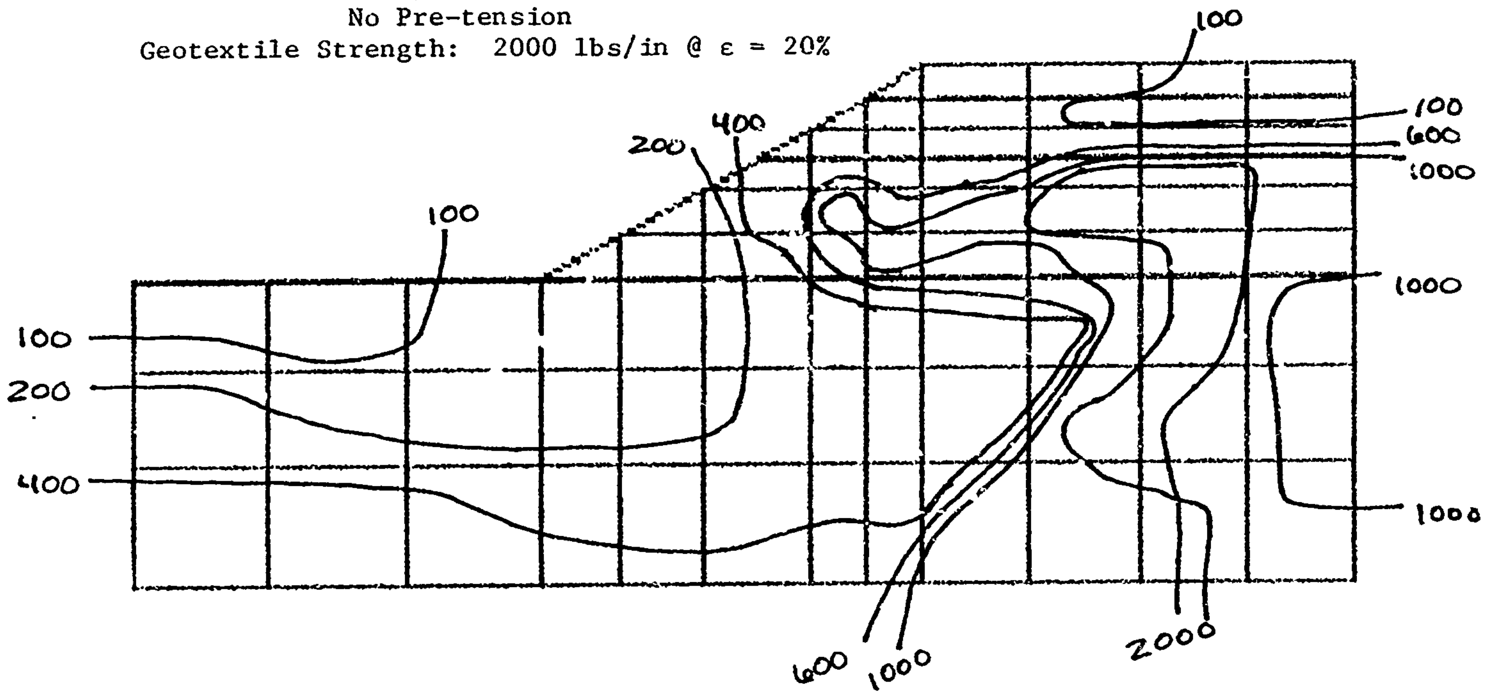


FIG. 3.32 DEVIATORIC STRESS CONTOUR OF SSTIPN ANALYSIS

Conditions: 1 Layer of Geotextile
Pre-tension = 1000 lbs/ft
Geotextile Strength: 2000 lbs/in @ ε = 20%

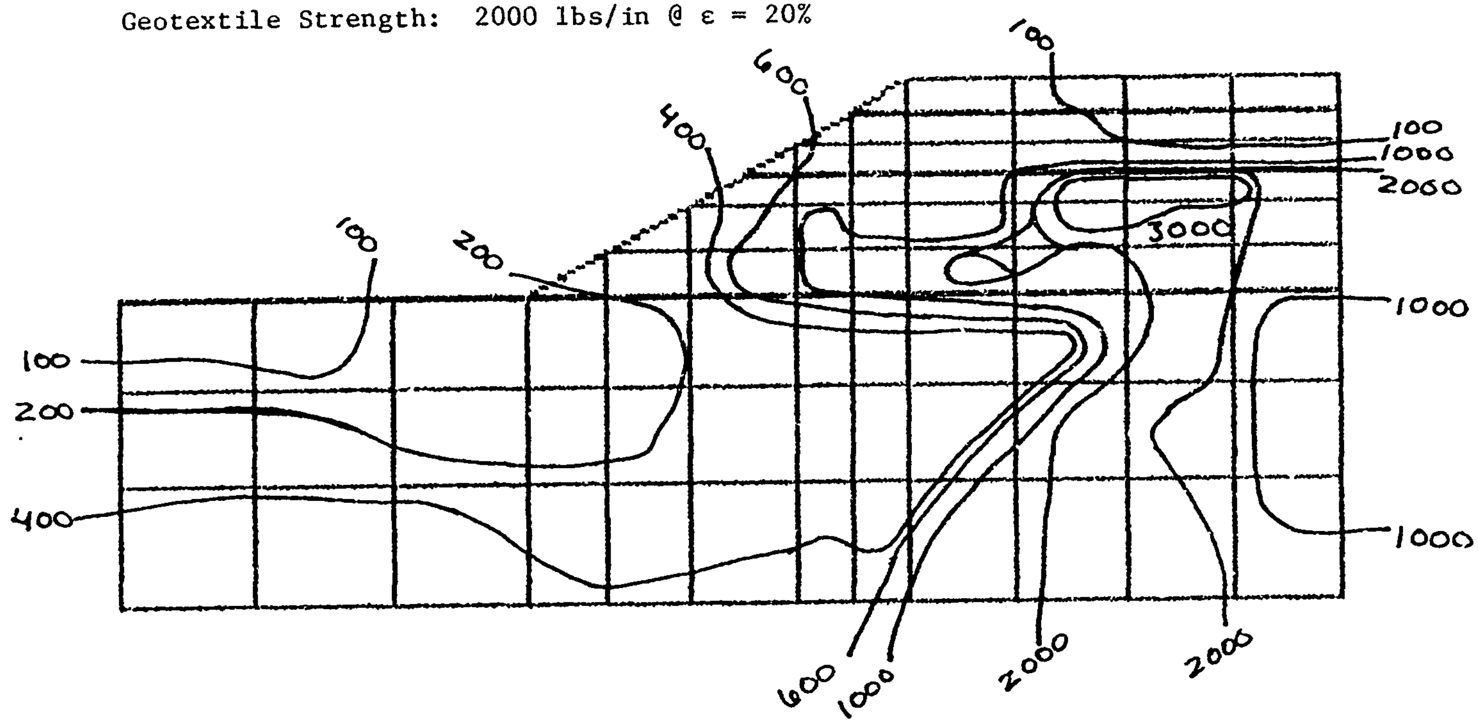


FIG. 3.33 DEVIATORIC STRESS CONTOUR OF SSTIPN ANALYSIS

Conditions: 1 Layer of Geotextile Extended
10 Ft Beyond Toe of Embankment
Pre-Tension - 1000 lbs/ft
Geotextile Strength: 2000 lbs/in @ ε 20%

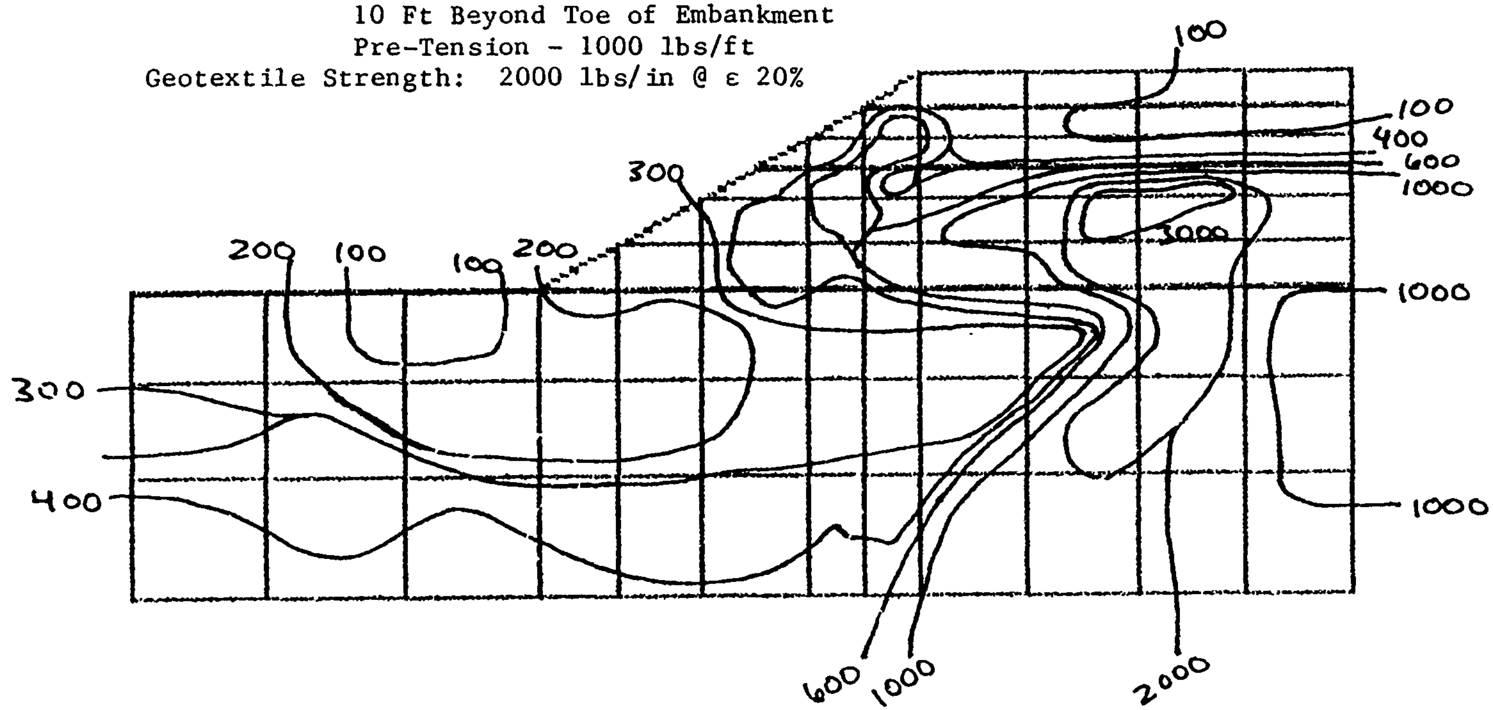


FIG. 3.34 DEVIATORIC STRESS CONTOUR OF SSTIPN ANALYSIS

Conditions: 1 Layer of Geotextile
No Pre-tension
Geotextile Strength: 4000 lbs/in @ $\varepsilon = 20\%$

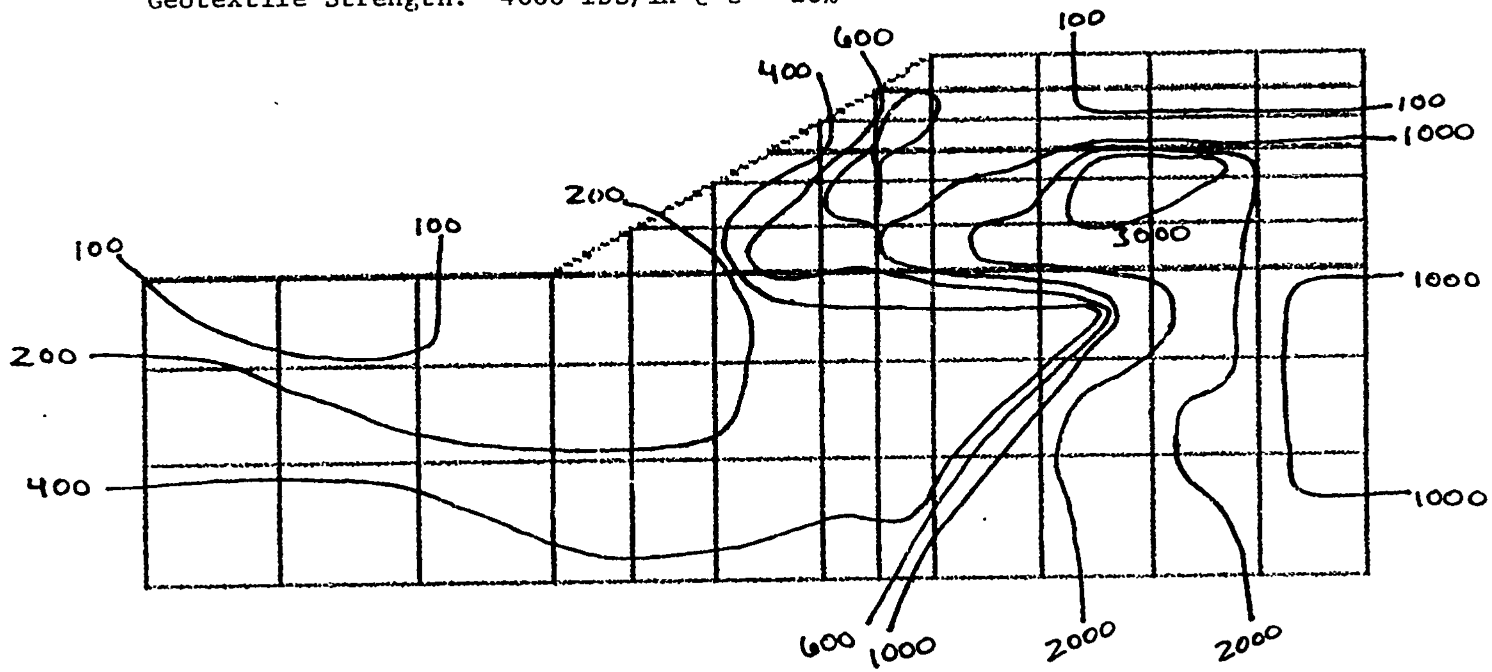


FIG. 3.35 DEVIATORIC STRESS CONTOUR OF SSTIPN ANALYSIS

Conditions: 1 Layer of Geotextile
Pre-tension = 1000 lbs/ft
Geotextile Strength: 4000 lbs/in @ ε= 20%

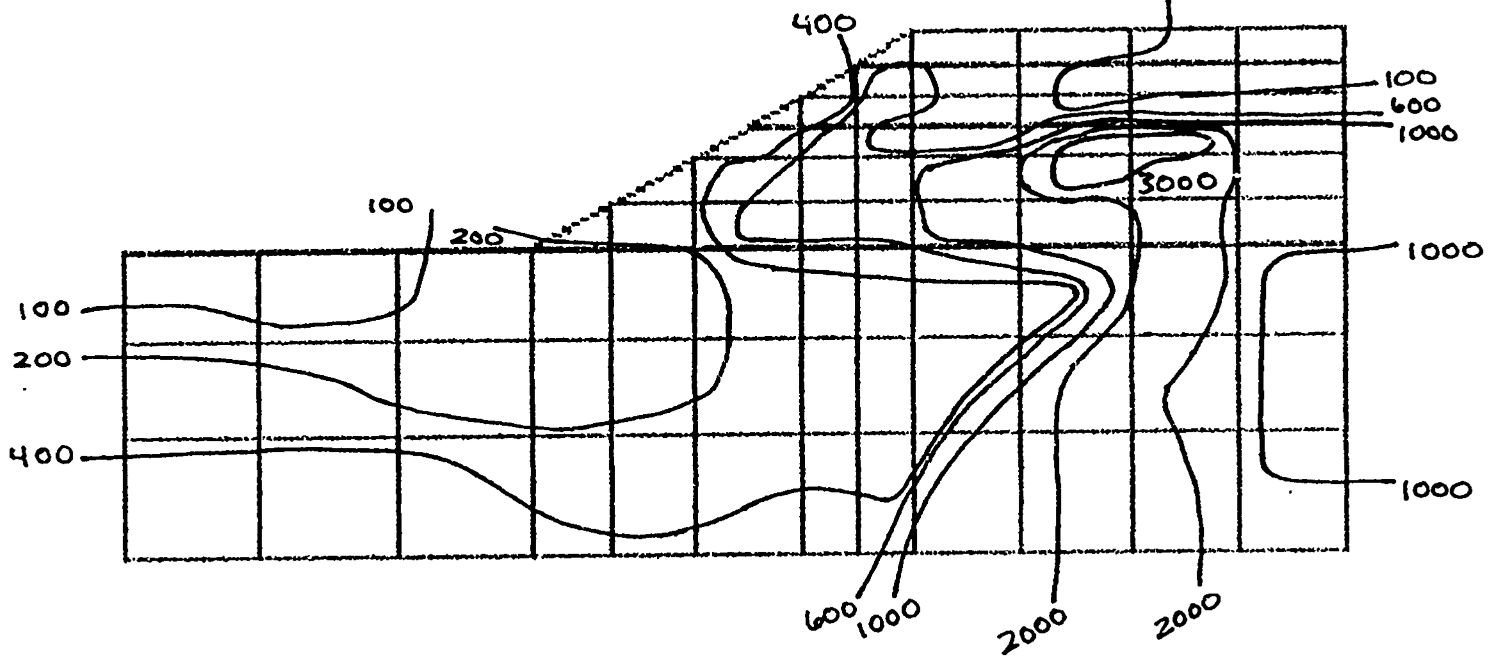


FIG. 3.36 DEVIATORIC STRESS CONTOUR OF SSTIPN ANALYSIS

Conditions: 1 Layer of Geotextile Extended 10 Ft
Beyond Toe of Embankment
Pe-tension = 1000 lbs/ft
Geotextile Strength: 4000 lbs/in @ ε = 20%

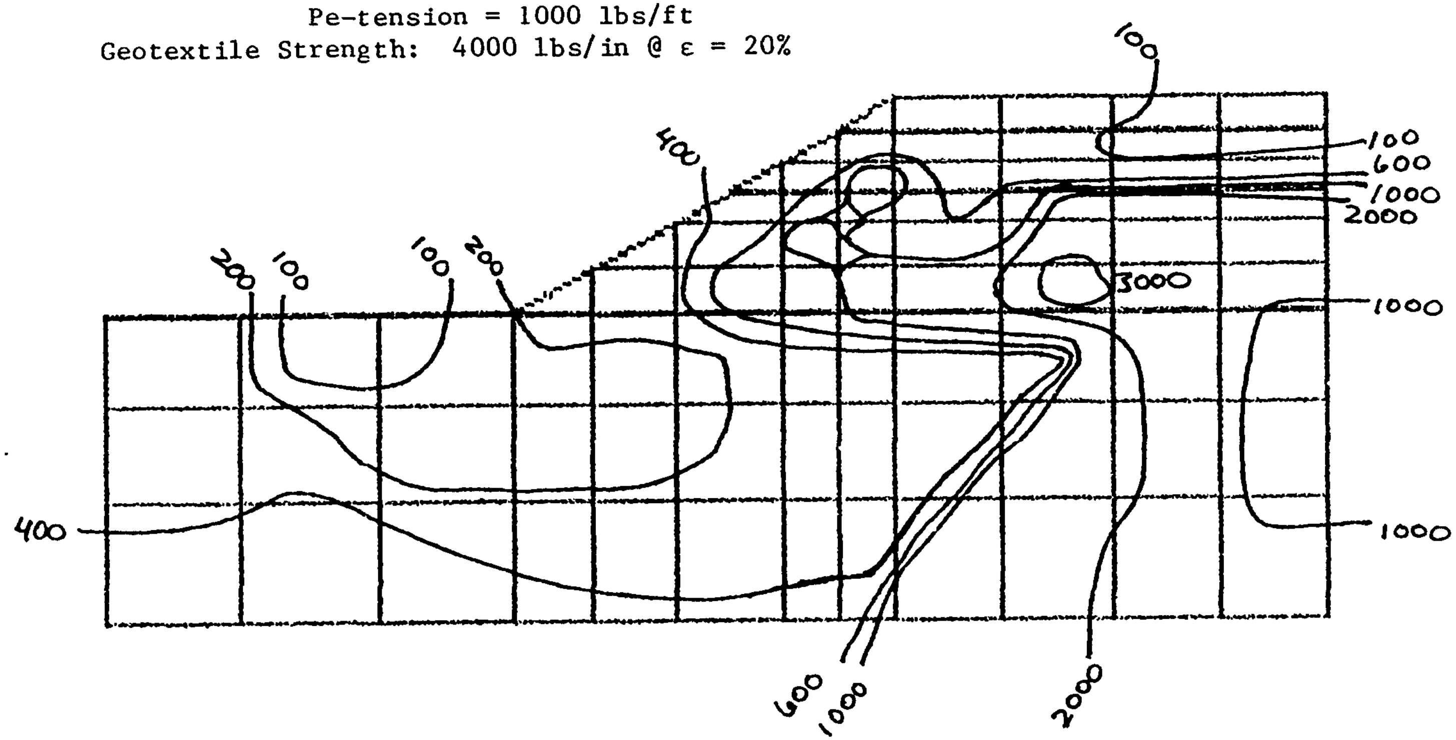


FIG. 3.37 DEVIATORIC STRESS CONTOUR OF SSTIPN ANALYSIS

Conditions: 1 Layer of Geotextile
No Pre-tension
Geotextile Strength: 2000 lbs/in @ ε = 5%

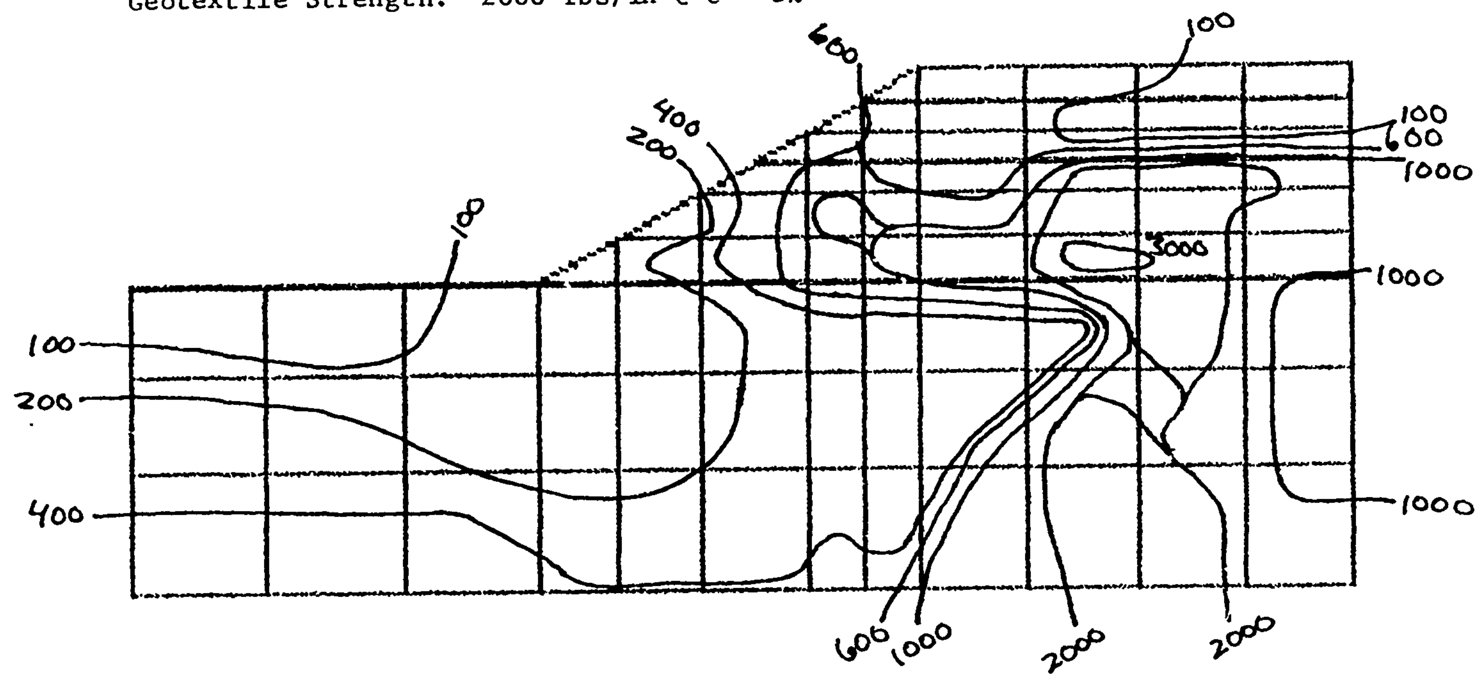


FIG. 3.38 DEVIATORIC STRESS CONTOUR OF SSTIPN ANALYSIS

Conditions: 1 Layer of Geotextile
Pre-tension = 1000 lbs/ft
Geotextile Strength: 2000 lbs/inc @ ε = 5%

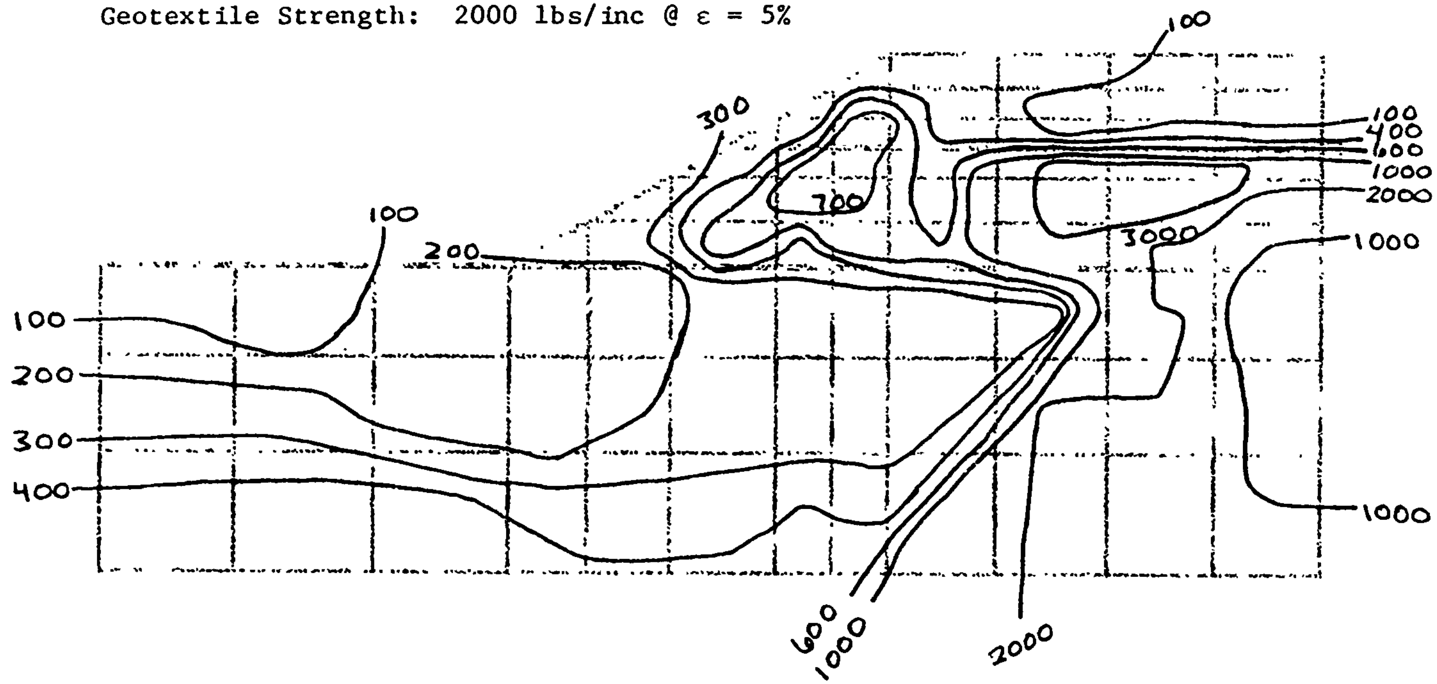


FIG. 3.39 DEVIATORIC STRESS CONTOUR OF SSTIPN ANALYSIS

Conditions: 1 Layer of Geotextile Extended 10 Ft
Beyond Toe of Embankment
Pre-tension = 1000 lbs/ft
Geotextile Strength: 2000 lbs/in @ $\varepsilon = 5\%$

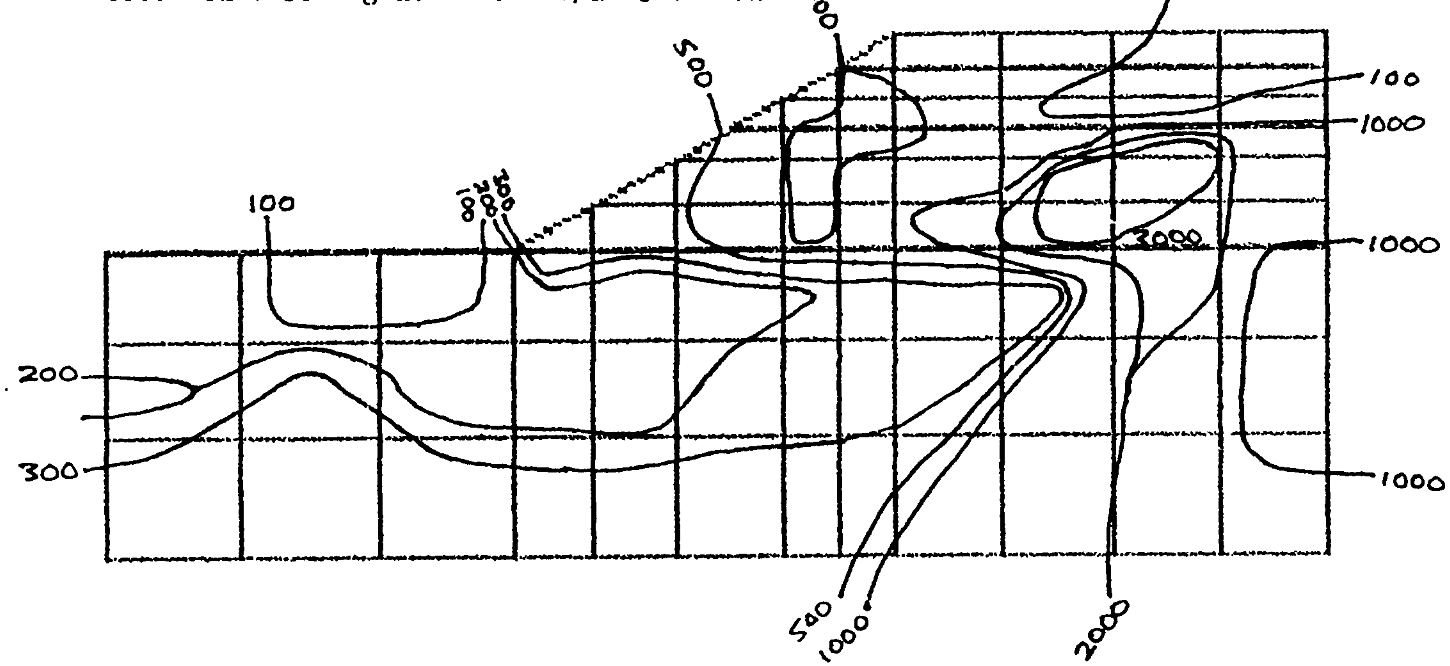


FIG. 3.40 DEVIATORIC STRESS CONTOUR OF SSTIPN ANALYSIS

Conditions: 1 Layer of Geotextile
No Pre-tension
Geotextile Strength: 4000 lbs/in @ ε = 5%

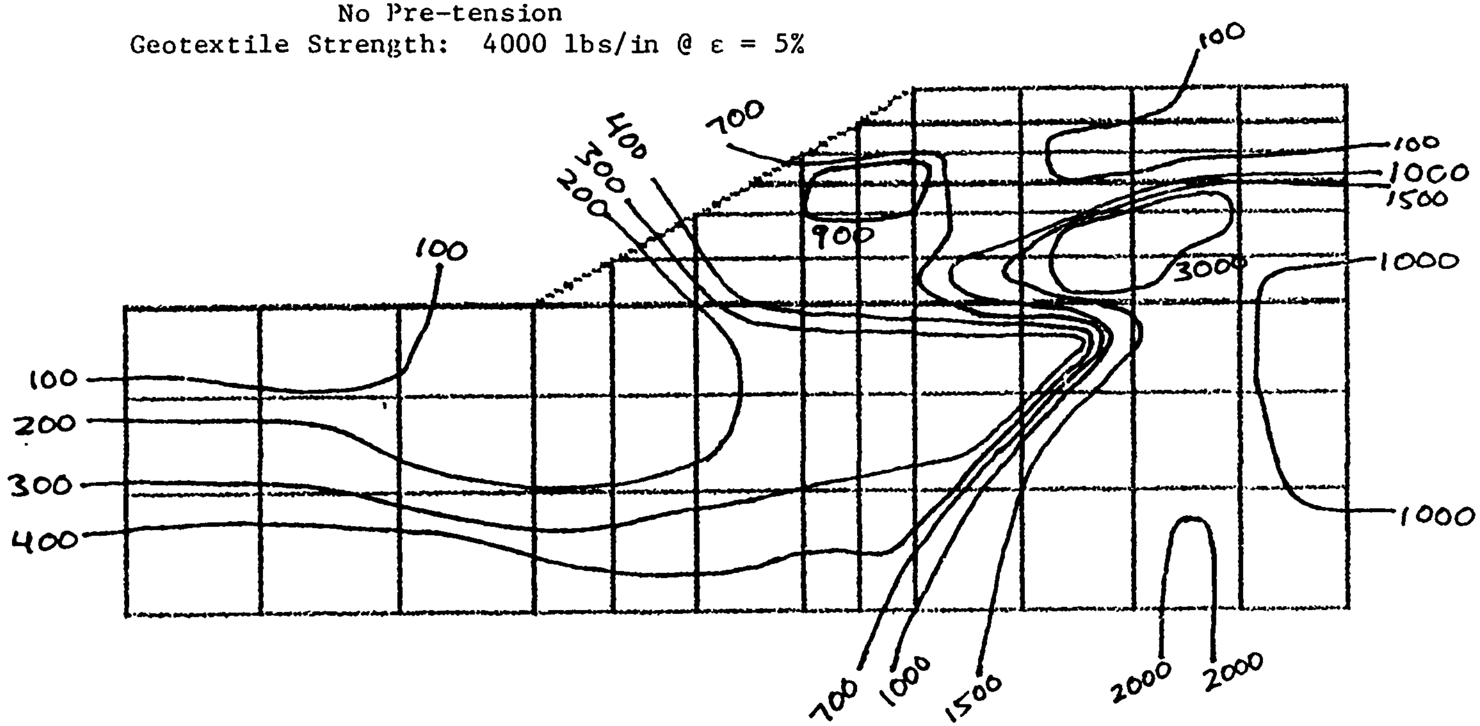


FIG. 3.41 DEVIATORIC STRESS CONTOUR OF SSTIPN ANALYSIS

Conditions: 1 Layer of Geotextile
Pre-tension = 1000 lbs/ft
Geotextile Strength: 4000 lbs/in @ ε = 5%

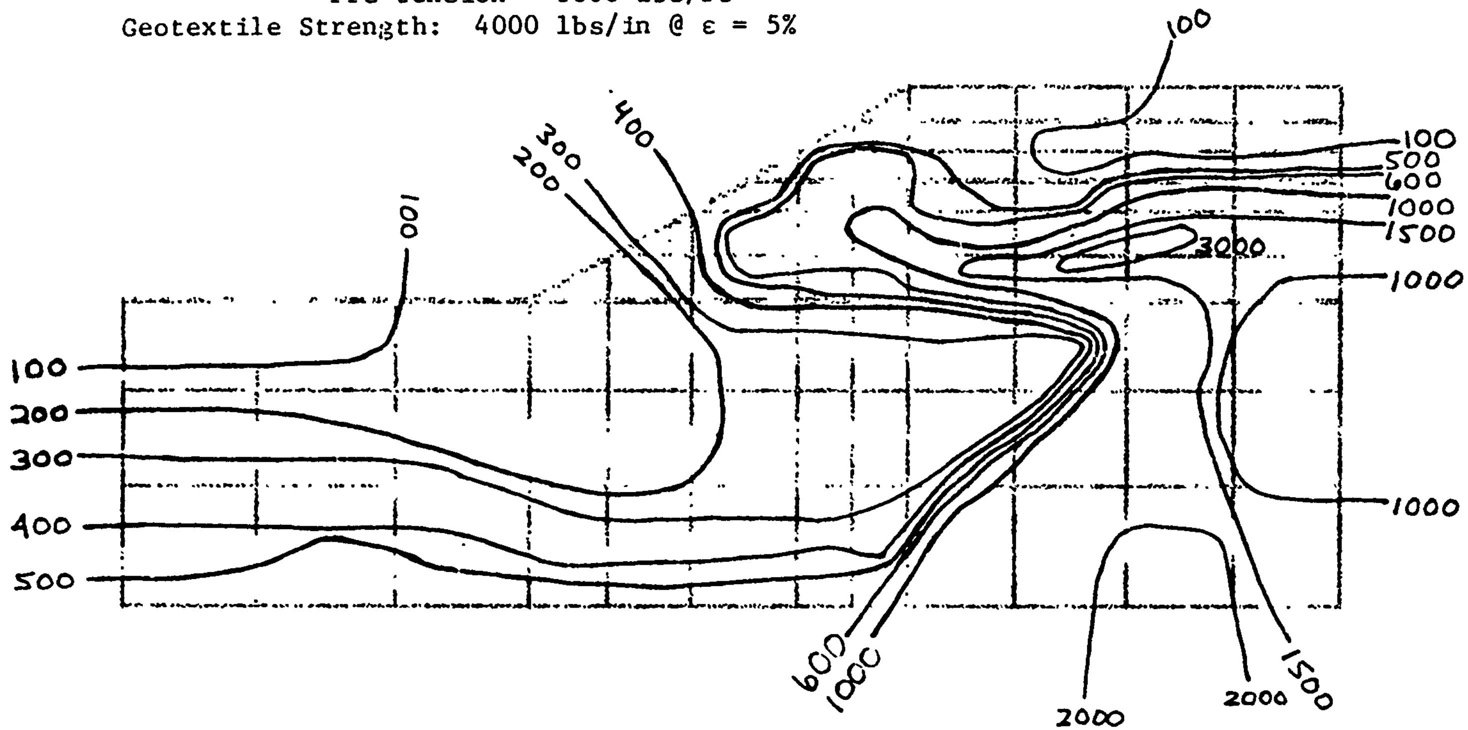


FIG. 3.42 DEVIATORIC STRESS CONTOUR OF SSTIPN ANALYSIS

Conditions: 1 Layer of Geotextile Extended 10 Ft
Beyond Toe of Embankment
Pre-tension = 1000 lbs/ft
Geotextile Strength: 4000 lbs/in @ ε = 5%

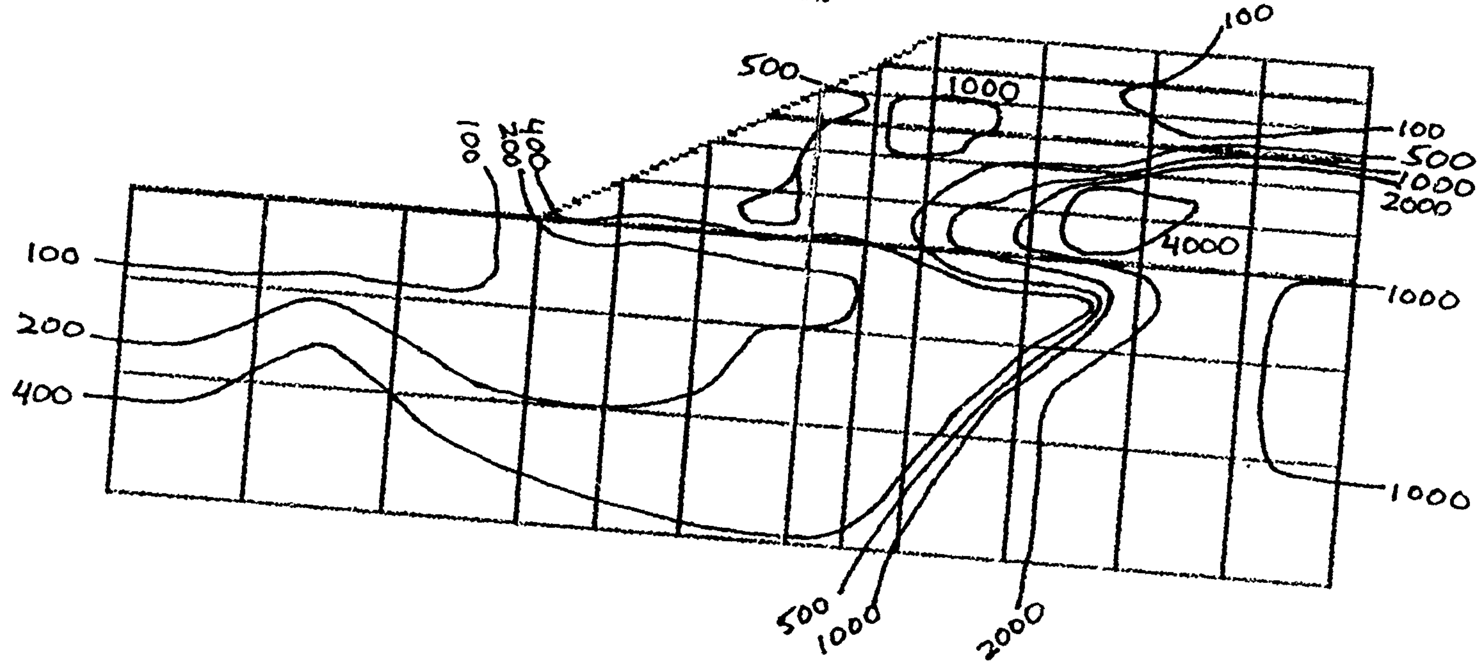


FIG. 3.43 DEVIATORIC STRESS CONTOUR OF SSTIPN ANALYSIS

3.2.2 Conclusions and Recommendations

There are two major factors which determine whether or not a numerical analysis is reliable. First, existing conditions must be modelled properly. Geometry and material properties must be as close to actual conditions as possible to accurately simulate behavior of the model. Second, the program must be able to evaluate conditions which may exist in the field. The soil model must be able to determine appropriate values for strength to simulate actual conditions. The hyperbolic model used in SSTIPN models soil conditions very accurately up to the point of failure. Once failure of the soil results, the model is not capable of simulating accurate conditions. Appendix E contains detail results of all analyses. Close observation of the analyses reveals the occurrence of shear and tensile failure within soil elements located within the thaw-unstable soil and roadway embankment. Failure occurs within the foundation soil from the placement of the embankment's first layer. With the placement of the additional five layers of embankment soil, an increasing number of soil elements enter a failure mode. Observation of stress contours for all conditions do not reveal a major redistribution in stress throughout the embankment and foundation as a result of the addition of a geotextile and increases of strength in the geotextile. The stress contours of the analysis with no layers of geotextile is not very different from the analysis with one layer of geotextile with a strength of 4000 pounds per inch at 5 percent strain. The inability of the hyperbolic model to accurately simulate soil conditions after failure is the primary cause for the difference. With soil elements in

a failure mode throughout each analysis, the computation of stresses within the embankment apparently do not differ very much. In the final analysis, the resulting stress distributions are similar.

Observation of the deformed roadway embankment models, Figures 3.12 through 3.27, reveal subtle differences between each condition. The inability of the hyperbolic model to simulate soil properties after failure has the same effect on displacements as it does on stress computation. However, the diagrams display more displacement with weaker geotextile properties. This indicates the positive effect of stronger geotextile properties. It is difficult to assess which property has the most positive effect due to the programs inability to distinguish between different strain values. However, geotextiles which have higher strength and higher modulae tend to maintain embankment integrity and reduce the failure mechanisms associated with embankment stability. The more the embankment is allowed to deform over the thaw-unstable region, the more the risk for longitudinal cracking in the wearing surface.

The addition of a soil berm and geotextile extension outside the toe of the embankment causes the degradation of thawing to occur beneath the berm more than the sideslopes of the embankment. The result is consolidation of the thaw-unstable soil beneath the berm more than beneath the sideslopes of the embankment. This increases embankment stability and reduces the risk of longitudinal cracking in the wearing surface.

Through further observation of geotextile forces in Appendix E, the failure capacity is not attained in any analysis. This indicates

that geotextile integrity is not impaired and will not fail under these conditions.

A comparison of Figure 3.8 and 3.12 reveals a discrepancy between the resulting displacements in the FEADAM84 and SSTIPN analysis. The soil model employed in the SSTIPN program is an older version of the model used in the FEADAM84 program. Displacements of the embankment model should have been similar given the same condition. The FEADAM84 deformed geometry, Figure 3.8, shows more displacement than the SSTIPN deformed geometry, Figure 3.12. The increased number of soil elements in the SSTIPN analysis should add more flexibility to the model. From the results obtained, the opposite occurs. The cause of this discrepancy is primarily attributed to the different generation of hyperbolic soil model.

Also, proper modelling of soil conditions after failure is best achieved with a plasticity model. The addition of this type of soil model in this program would greatly enhance its effectiveness in evaluating roadway embankments constructed over weak soil.

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APPENDIX A

STABGM INITIAL ANALYSIS

Figure 2.4 depicts the conditions of the initial STABGM analysis. Detailed results of the initial analyses are contained herein. Minimum factor of safety data from analyses with no layers of reinforcement with different foundation geometry are enclosed. Comparison of minimum factor of safety data with three and four layers of reinforcement are also enclosed.

Program STABR -- Version 2.84 (MS-DOS)

BISHOP MODIFIED AND/OR ORDINARY METHOD OF SLICES

permafrost depth 5 feet, 10 feet from centerline

CONTROL DATA

NUMBER OF SPECIFIED CENTERS	0
NUMBER OF DEPTH LIMITING TANGENTS	3
NUMBER OF VERTICAL SECTIONS	12
NUMBER OF SOIL LAYER BOUNDARIES	5
NUMBER OF PORE PRESSURE LINES	0
NUMBER OF POINTS DEFINING COHESION PROFILE	0

SEISMIC COEFFICIENT S1,S2 = .00, .00

UNIT WEIGHT OF WATER = 62.40

SEARCH IS BASED ON BISHOP MODIFIED METHOD

SEARCH STARTS AT CENTER (37.0, 22.0) WITH FINAL GRID OF 2.0

ALL CIRCLES TANGENT TO DEPTH, 28.0, 30.0, 35.0,

GEOMETRY

SECTIONS	.0	10.0	13.0	15.0	20.0	32.0	42.0	64.0	69.0	71.0	74.0
T. CRACKS	20.0	20.0	20.0	20.0	20.0	20.0	25.0	25.0	25.0	25.0	25.0
W IN CRACK	20.0	20.0	20.0	20.0	20.0	20.0	25.0	25.0	25.0	25.0	25.0
BOUNDARY 1	20.0	20.0	20.0	20.0	20.0	20.0	25.0	25.0	25.0	25.0	25.0
BOUNDARY 2	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0
BOUNDARY 3	35.0	35.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	35.0
BOUNDARY 4	35.0	35.0	28.0	30.0	35.0	35.0	35.0	35.0	30.0	28.0	35.0
BOUNDARY	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0

REINFORCING FORCE DATA AT 0 LEVEL(s)

SOIL PROPERTIES

LAYER	COHESION	FRICTION ANGLE	DENSITY
1	.0	35.0	135.0
2	1000.0	40.0	120.0
3	100.0	.0	105.0
4	1000.0	40.0	120.0

BISHOP MODIFIED AND OR ORDINARY METHOD OF SLICES

permafrost depth 5 feet, 10 feet from centerline

NUMBER	TANGENT	RADIUS	(X) CENTER	(Y) CENTER	FS(BISHOP)	FS(OMS)	dFS(BS
1	28.0	6.0	37.0	22.0	CENTER BELOW INTERPOLATED CR		
2	28.0	6.0	35.0	22.0	CENTER BELOW INTERPOLATED CR		
3	28.0	10.0	37.0	18.0	.[illegible]	.[illegible]3	.0[illegible]
4	28.0	6.0	41.0	22.0	CENTER BELOW INTERPOLATED CR		
5	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		

6	28.0	10.0	35.0	18.0	1.037	.921	.000
7	28.0	12.0	37.0	16.0	.988	.909	.000
8	28.0	10.0	39.0	18.0	1.037	.921	.000
9	28.0	8.0	37.0	20.0	.977	.853	.000
10	28.0	12.0	35.0	16.0	1.041	.950	.000
11	28.0	12.0	39.0	16.0	1.041	.950	.000
12	28.0	8.0	39.0	20.0	1.076	.927	.000
13	28.0	8.0	33.0	20.0	1.101	.927	.000

F.S. MINIMUM= .966 FOR THE CIRCLE OF CENTER (37.0, 18.0)

BISHOP MODIFIED AND/OR ORDINARY METHOD OF SLICES

permafrost depth 5 feet, 10 feet from centerline

NUMBER	TANGENT	RADIUS	(X) CENTER	(Y) CENTER	FS(BISHOP)	FS(OMS)	dFS(BS)
1	30.0	10.0	35.0	20.0	.932	.842	.000
2	30.0	10.0	31.0	20.0	1.702	1.305	.000
3	30.0	14.0	35.0	16.0	.914	.847	.000
4	30.0	10.0	39.0	20.0	.932	.842	.000
5	30.0	6.0	35.0	24.0	CENTER	BELOW	INTERPOLATED CR.
6	30.0	14.0	33.0	16.0	1.012	.926	.000
7	30.0	16.0	35.0	14.0	.930	.872	.000
8	30.0	14.0	37.0	16.0	.886	.823	.000
9	30.0	12.0	35.0	18.0	.910	.831	.000
10	30.0	16.0	37.0	14.0	.906	.852	.000
11	30.0	14.0	39.0	16.0	.914	.847	.000
12	30.0	12.0	37.0	18.0	.874	.802	.000
13	30.0	12.0	35.0	18.0	.910	.831	.000
14	30.0	12.0	39.0	18.0	.910	.831	.000
15	30.0	10.0	37.0	20.0	.882	.802	.000
16	30.0	14.0	35.0	16.0	.914	.847	.000
17	30.0	14.0	39.0	16.0	.914	.847	.000
18	30.0	10.0	39.0	20.0	.932	.842	.000
19	30.0	10.0	35.0	20.0	.932	.842	.000

F.S. MINIMUM= .874 FOR THE CIRCLE OF CENTER (37.0, 18.0)

BISHOP MODIFIED AND/OR ORDINARY METHOD OF SLICES

permafrost depth 5 feet, 10 feet from centerline

NUMBER	TANGENT	RADIUS	(X) CENTER	(Y) CENTER	FS(BISHOP)	FS(OMS)	dFS(BS)
1	35.0	15.0	35.0	20.0	.860	.917	.000
2	35.0	15.0	31.0	20.0	1.030	.969	.000
3	35.0	19.0	35.0	16.0	[illegible]	.794	.000
4	35.0	15.0	39.0	20.0	.860	.817	.000
5	35.0	11.0	35.0	24.0	CENTER	BELOW	INTERPOLATED CR.
6	35.0	19.0	33.0	16.0	.877	[illegible]	.000
7	35.0	21.0	35.0	14.0	.939	.799	.000
8	35.0	19.0	37.0	16.0	[illegible]	.737	.000
9	35.0	17.0	35.0	18.0	.812	[illegible]	.000
10	35.0	21.0	37.0	14.0	.909	[illegible]	.000
11	35.0	19.0	39.0	16.0	[illegible]	[illegible]	.000
12	35.0	17.0	37.0	18.0	.923	.795	.000
13	35.0	21.0	35.0	14.0	.939	[illegible]	.000
14	35.0	21.0	39.0	14.0	[illegible]	.799	.000
15	35.0	17.0	39.0	18.0	.842	[illegible]	.000
16	35.0	17.0	35.0	18.0	.842	.797	.000

F.S. MINIMUM= .925 FOR THE CIRCLE OF CENTER ([illegible])

Program STABR -- Version 2.84 (MS-DOS)

BISHOP MODIFIED AND/OR ORDINARY METHOD OF SLICES

permafrost depth 5 feet, 15 feet from centerline

CONTROL DATA

NUMBER OF SPECIFIED CENTERS	0
NUMBER OF DEPTH LIMITING TANGENTS	3
NUMBER OF VERTICAL SECTIONS	12
NUMBER OF SOIL LAYER BOUNDARIES	5
NUMBER OF PORE PRESSURE LINES	0
NUMBER OF POINTS DEFINING COHESION PROFILE	0

SEISMIC COEFFICIENT S1,S2 = .00, .00

UNIT WEIGHT OF WATER = 62.40

SEARCH IS BASED ON BISHOP MODIFIED METHOD

SEARCH STARTS AT CENTER (37.0, 22.0) WITH FINAL GRID OF 2.0

ALL CIRCLES TANGENT TO DEPTH, 28.0, 30.0, 35.0,

GEOMETRY

SECTIONS	.0	15.0	18.0	20.0	25.0	32.0	42.0	59.0	64.0	66.0	69.0
T. CRACKS	20.0	20.0	20.0	20.0	20.0	20.0	25.0	25.0	25.0	25.0	25.0
W IN CRACK	20.0	20.0	20.0	20.0	20.0	20.0	25.0	25.0	25.0	25.0	25.0
BOUNDARY 1	20.0	20.0	20.0	20.0	20.0	20.0	25.0	25.0	25.0	25.0	25.0
BOUNDARY 2	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0
BOUNDARY 3	35.0	35.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	35.0
BOUNDARY 4	35.0	35.0	28.0	30.0	35.0	35.0	35.0	35.0	30.0	28.0	35.0
BOUNDARY 5	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0

REINFORCING FORCE DATA AT 0 LEVEL(s)

SOIL PROPERTIES

LAYER	COHESION	FRICTION ANGLE	DENSITY
1	.0	35.0	135.0
2	1000.0	40.0	120.0
3	100.0	.0	105.0
4	1000.0	40.0	120.0

BISHOP MODIFIED AND/OR ORDINARY METHOD OF SLICES

permafrost depth 5 feet, 15 feet from centerline

NUMBER	TANGENT	RADIUS	(X) CENTER	(Y) CENTER	FS(BISHOP)	FS(OMS)	dFS(BS)
1	28.0	6.0	37.0	22.0	CENTER BELOW INTERPOLATED CR		
2	28.0	6.0	37.0	22.0	CENTER BELOW INTERPOLATED CR		
3	28.0	10.0	37.0	18.0	[illegible]	[illegible]	.00[illegible]
4	28.0	6.0	41.0	22.0	CENTER BELOW INTERPOLATED CR		
5	28.0	[illegible]	[illegible]	[illegible]	CIRCLE [illegible] SLOPE		

6	28.0	10.0	35.0	18.0	1.037	.921	.000
7	28.0	12.0	37.0	16.0	.988	.909	.000
8	28.0	10.0	39.0	18.0	1.037	.921	.000
9	28.0	8.0	37.0	20.0	.977	.853	.000
10	28.0	12.0	35.0	16.0	1.041	.950	.000
11	28.0	12.0	39.0	16.0	1.041	.950	.000
12	28.0	8.0	39.0	20.0	1.076	.927	.000
13	28.0	8.0	35.0	20.0	1.101	.927	.000

F.S. MINIMUM= .966 FOR THE CIRCLE OF CENTER (37.0, 18.0)

BISHOP MODIFIED AND/OR ORDINARY METHOD OF SLICES

permafrost depth 5 feet, 15 feet from centerline

NUMBER	TANGENT	RADIUS	(X) CENTER	(Y) CENTER	FS(BISHOP)	FS(OMS)	dFS(BS)
1	30.0	10.0	35.0	20.0	.932	.842	.000
2	30.0	10.0	31.0	20.0	1.702	1.305	.000
3	30.0	14.0	35.0	16.0	.914	.847	.000
4	30.0	10.0	39.0	20.0	.932	.842	.000
5	30.0	6.0	35.0	24.0	CENTER BELOW INTERPOLATED CR.		
6	30.0	14.0	33.0	16.0	1.012	.926	.000
7	30.0	16.0	35.0	14.0	.930	.873	.000
8	30.0	14.0	37.0	16.0	.886	.823	.000
9	30.0	12.0	35.0	18.0	.910	.831	.000
10	30.0	16.0	37.0	14.0	.906	.852	.000
11	30.0	14.0	39.0	16.0	.914	.847	.000
12	30.0	12.0	37.0	18.0	.874	.802	.000
13	30.0	12.0	35.0	18.0	.910	.831	.000
14	30.0	12.0	39.0	18.0	.910	.831	.000
15	30.0	10.0	37.0	20.0	.882	.802	.000
16	30.0	14.0	35.0	16.0	.914	.847	.000
17	30.0	14.0	39.0	16.0	.914	.847	.000
18	30.0	10.0	39.0	20.0	.932	.842	.000
19	30.0	10.0	35.0	20.0	.932	.842	.000

F.S. MINIMUM= .874 FOR THE CIRCLE OF CENTER (37.0, 18.0)

BISHOP MODIFIED AND/OR ORDINARY METHOD OF SLICES

permafrost depth 5 feet, 15 feet from centerline

NUMBER	TANGENT	RADIUS	(X) CENTER	(Y) CENTER	FS(BISHOP)	FS(OMS)	dFS(BS)
1	35.0	15.0	35.0	20.0	.960	[illegible]	.000
2	35.0	15.0	31.0	20.0	[illegible]	[illegible]	.000
3	35.0	19.0	35.0	16.0	.837	[illegible]	.000
4	35.0	15.0	39.0	20.0	.860	[illegible]	.000
5	35.0	11.0	35.0	24.0	CENTER BELOW INTERPOLATED CR		
6	35.0	19.0	33.0	16.0	1.174	1.035	.000
7	35.0	21.0	35.0	14.0	.962	[illegible]	.000
8	35.0	19.0	37.0	16.0	.925	[illegible]	.000
9	35.0	17.0	35.0	18.0	.942	[illegible]	.000
10	35.0	21.0	37.0	14.0	[illegible]	[illegible]	.000
11	35.0	19.0	39.0	16.0	.977	[illegible]	[illegible]
12	35.0	17.0	37.0	[illegible]	.928	[illegible]	[illegible]
13	35.0	21.0	35.0	[illegible]	[illegible]	1.019	[illegible]
14	35.0	21.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
15	35.0	17.0	39.0	[illegible]	[illegible]	[illegible]	[illegible]
16	[illegible]	[illegible]	35.0	[illegible]	[illegible]	[illegible]	[illegible]

F.S. MINIMUM= .925 FOR THE CIRCLE OF CENTER ([illegible] [illegible])

Program STABR -- Version 2.84 (MS-DOS)

BISHOP MODIFIED AND/OR ORDINARY METHOD OF SLICES

permafrost depth 5 feet, 20 feet from centerline

CONTROL DATA

NUMBER OF SPECIFIED CENTERS	0
NUMBER OF DEPTH LIMITING TANGENTS	3
NUMBER OF VERTICAL SECTIONS	12
NUMBER OF SOIL LAYER BOUNDARIES	5
NUMBER OF PORE PRESSURE LINES	0
NUMBER OF POINTS DEFINING COHESION PROFILE	0

SEISMIC COEFFICIENT S1,S2 = .00, .00

UNIT WEIGHT OF WATER = 62.40

SEARCH IS BASED ON BISHOP MODIFIED METHOD

SEARCH STARTS AT CENTER (37.0, 22.0) WITH FINAL GRID OF 2.0

ALL CIRCLES TANGENT TO DEPTH, 28.0, 30.0, 35.0,

GEOMETRY

SECTIONS	.0	20.0	23.0	25.0	30.0	32.0	42.0	54.0	59.0	61.0	64.0
T. CRACKS	20.0	20.0	20.0	20.0	20.0	20.0	25.0	25.0	25.0	25.0	25.0
W IN CRACK	20.0	20.0	20.0	20.0	20.0	20.0	25.0	25.0	25.0	25.0	25.0
BOUNDARY 1	20.0	20.0	20.0	20.0	20.0	20.0	25.0	25.0	25.0	25.0	25.0
BOUNDARY 2	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0
BOUNDARY 3	35.0	35.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	35.0
BOUNDARY 4	35.0	35.0	28.0	30.0	35.0	35.0	35.0	35.0	30.0	28.0	35.0
BOUNDARY 5	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0

REINFORCING FORCE DATA AT 0 LEVEL(s)

SOIL PROPERTIES

LAYER	COHESION	FRICTION ANGLE	DENSITY
1	.0	35.0	135.0
2	1000.0	40.0	120.0
3	100.0	.0	[illegible]
4	1000.0	40.0	120.0

BISHOP MODIFIED AND/OR ORDINARY METHOD OF SLICES

permafrost depth 5 feet, 20 feet from centerline

NUMBER	TANGENT	RADIUS	(X) CENTER	(Y) CENTER	FS(BISH.)	FS(OMS)	(FS)BS)
1	28.0	5.0	37.0	22.0	CENTER BELOW INTERPOLATED CF		
2	28.0	6.0	[illegible]	[illegible]	CENTER BELOW INTERPOLATED CF		
3	28.0	10.0	37.0	18.0	[illegible]	.958	.00
4	28.0	5.0	41.0	22.0	CENTER BELOW INTERPOLATED CF		
5	[illegible]	[illegible]	[illegible]	[illegible]	CIRCLE OUTSIDE SLOPE		

CIRCLE OUTSIDE SLOPE

6	28.0	10.0	35.0	18.0	1.037	.921	.000
7	28.0	12.0	37.0	16.0	.988	.909	.000
8	28.0	10.0	39.0	18.0	1.037	.921	.000
9	28.0	8.0	37.0	20.0	.977	.853	.000
10	28.0	12.0	35.0	16.0	1.041	.950	.000
11	28.0	12.0	39.0	16.0	1.041	.950	.000
12	28.0	8.0	39.0	20.0	1.076	.927	.000
13	28.0	8.0	35.0	20.0	1.101	.927	.000

F.S. MINIMUM= .966 FOR THE CIRCLE OF CENTER (37.0, 18.0)

BISHOP MODIFIED AND/OR ORDINARY METHOD OF SLICES

permafrost depth 5 feet, 20 feet from centerline

NUMBER	TANGENT	RADIUS	(X) CENTER	(Y) CENTER	FS(BISHOP)	FS(OMS)	dFS(BS)
1	30.0	10.0	35.0	20.0	.932	.842	.000
2	30.0	10.0	31.0	20.0	2.089	1.319	.000
3	30.0	14.0	35.0	16.0	.914	.847	.000
4	30.0	10.0	39.0	20.0	.932	.843	.000
5	30.0	6.0	35.0	24.0	CENTER BELOW INTERPOLATED CR.		
6	30.0	14.0	33.0	16.0	1.249	1.234	.000
7	30.0	16.0	35.0	14.0	.930	.872	.000
8	30.0	14.0	37.0	16.0	.886	.823	.000
9	30.0	12.0	35.0	18.0	.910	.831	.000
10	30.0	16.0	37.0	14.0	.906	.852	.000
11	30.0	14.0	39.0	16.0	.914	.847	.000
12	30.0	12.0	37.0	18.0	.874	.802	.000
13	30.0	12.0	35.0	18.0	.910	.831	.000
14	30.0	12.0	39.0	18.0	.910	.831	.000
15	30.0	10.0	37.0	20.0	.883	.802	.000
16	30.0	14.0	35.0	16.0	.914	.847	.000
17	30.0	14.0	39.0	16.0	.914	.847	.000
18	30.0	10.0	39.0	20.0	.932	.843	.000
19	30.0	10.0	35.0	20.0	.932	.842	.000

F.S. MINIMUM= .874 FOR THE CIRCLE OF CENTER (37.0, 18.0)

BISHOP MODIFIED AND/OR ORDINARY METHOD OF SLICES

permafrost depth 3 feet, 20 foot from centerline

NUMBER	TANGENT	RADIUS	(X) CENTER	(Y) CENTER	FS(BISHOP)	FS(OMS)	dFS(BS)
1	35.0	15.0	35.0	20.0	4.538	4.062	.000
2	35.0	15.0	31.0	20.0	8.673	7.596	.000
3	35.0	19.0	35.0	16.0	5.054	4.374	.000
4	35.0	15.0	39.0	20.0	.560	.818	.000
5	35.0	11.0	35.0	24.0	CENTER BELOW INTERPOLATED CR.		
6	35.0	15.0	37.0	20.0	.860	.849	.000
7	35.0	17.0	39.0	18.0	.942	.797	.000
8	35.0	15.0	41.0	20.0	.917	.868	.000
9	35.0	13.0	39.0	22.0	CENTER BELOW INTERPOLATED CR		
10	35.0	17.0	37.0	18.0	1.036	1.743	.000
11	35.0	19.0	39.0	16.0	.978	.781	.000
12	35.0	17.0	41.0	18.0	.884	.877	.000
13	35.0	19.0	37.0	16.0	3.349	3.179	.000
14	35.0	19.0	41.0	16.0	[illegible]	.926	.000
15	35.0	15.0	41.0	20.0	.717	.368	.000
16	35.0	15.0	37.0	20.0	.860	.849	.000

F.S. MINIMUM= .942 FOR THE CIRCLE OF CENTER (39.0, 18.0)

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1Program STABR -- Version 2.84 (MS-DOS) .


0        BISHOP MODIFIED AND/OR ORDINARY METHOD OF SLICES
Opermafrost depth 5 feet, 20 feet from centerline
OCONTROL DATA
      NUMBER OF SPECIFIED CENTERS                           0
      NUMBER OF DEPTH LIMITING TANGENTS                     3
      NUMBER OF VERTICAL SECTIONS                          12
      NUMBER OF SOIL LAYER BOUNDARIES                       5
      NUMBER OF PORE PRESSURE LINES                         0
      NUMBER OF POINTS DEFINING COHESION PROFILE   0
OSEISMIC COEFFICIENT S1,S2     =    .00,   .00
OUNIT WEIGHT OF WATER          =        62.40
O SEARCH IS BASED ON BISHOP MODIFIED METHOD

 SEARCH STARTS AT CENTER (   37.0,   22.0) WITH FINAL GRID OF   2.0
OALL CIRCLES TANGENT TO DEPTH,   28.0,   30.0,   35.0,
OGEOMETRY
0     SECTIONS        .0   20.0   23.0   25.0   30.0   32.0   42.0   54.0   59.0   61.0   64.

      T. CRACKS    20.0   20.0   20.0   20.0   20.0   20.0   25.0   25.0   25.0   25.0   25.
      W IN CRACK   20.0   20.0   20.0   20.0   20.0   20.0   25.0   25.0   25.0   25.0   25.
      BOUNDARY 1   20.0   20.0   20.0   20.0   20.0   20.0   25.0   25.0   25.0   25.0   25.
      BOUNDARY 2   25.0   25.0   25.0   25.0   25.0   25.0   25.0   25.0   25.0   25.0   25.
      BOUNDARY 3   35.0   35.0   25.0   25.0   25.0   25.0   25.0   25.0   25.0   25.0   35.
      BOUNDARY 4   35.0   35.0   28.0   30.0   35.0   35.0   35.0   35.0   30.0   28.0   35.
      BOUNDARY 5   35.0   35.0   35.0   35.0   35.0   35.0   35.0   35.0   35.0   35.0   35.
OREINFORCING FORCE DATA AT   3 LEVEL(s)

0     Y=      20.50      NO. OF FORCE POINTS=  4
                X          FORCE
              33.0            .0
              30.0        1666.0
               3.0        1666.0
                .0            .0

0     Y=      22.00      NO. OF FORCE POINTS=  4
                X          FORCE
              36.0            .0
              33.0        5000.0
               3.0        5000.0
                .0            .0

0     Y=      24.00      NO. OF FORCE POINTS=  4
                X          FORCE
              40.0            .0
              37.0        5000.0
               3.0        5000.0
                .0            .0

OSOIL PROPERTIES
0       LAYER              COHESION   FRICTION ANGLE     DENSITY
          1                     .0          35.0          125.0
          2                 1000.0          40.0          120.0
          3                  100.0            .0          105.0
          4                 1000.0          10.0          120.0
0        BISHOP MODIFIED AND/OR ORDINARY METHOD OF SLICES
Opermafrost depth 5 feet, 20 feet from centerline
ONUMBER   TANGENT   RADIUS    (X) CENTER   (Y) CENTER    FS(BISHOP)   FS(OMS)     (FS(BI

     1      28.0       6.0          37.0          22.0       CENTER BELOW INTERPOLATED (
     2      28.0       6.0          35.0          22.0       CENTER BELOW INTERPOLATED (
```

3	28.0	10.0	37.0	18.0	3.282	3.183	2.3
4	28.0	6.0	41.0	22.0	CENTER BELOW INTERPOLATED C		
5	28.0	2.0	37.0	26.0	CIRCLE OUTSIDE SLOPE		
6	28.0	10.0	35.0	18.0	3.493	3.378	2.45
7	28.0	12.0	37.0	16.0	3.502	3.423	2.5
8	28.0	10.0	39.0	18.0	3.494	3.378	2.45
9	28.0	8.0	37.0	20.0	2.908	2.794	1.91
10	28.0	9.0	35.0	20.0	3.197	3.023	2.09
11	28.0	8.0	39.0	20.0	3.166	3.017	2.09
12	28.0	6.0	37.0	22.0	CENTER BELOW INTERPOLATED C		
13	28.0	10.0	35.0	18.0	3.493	3.378	2.45
14	28.0	10.0	39.0	18.0	3.494	3.378	2.45
15	28.0	6.0	39.0	22.0	CENTER BELOW INTERPOLATED C		
16	28.0	6.0	35.0	22.0	CENTER BELOW INTERPOLATED C		

0F.S. MINIMUM= 2.908 FOR THE CIRCLE OF CENTER (37.0, 20.0)

0 BISHOP MODIFIED AND/OR ORDINARY METHOD OF SLICES

0permafrost depth 5 feet, 20 feet from centerline

0NUMBER	TANGENT	RADIUS	(X) CENTER	(Y) CENTER	FS(BISHOP)	FS(OMS)	dFS(BS
1	30.0	8.0	35.0	22.0	CENTER BELOW INTERPOLATED CI		
2	30.0	8.0	31.0	22.0	CENTER BELOW INTERPOLATED CI		
3	30.0	12.0	35.0	18.0	2.379	2.300	1.46
4	30.0	8.0	39.0	22.0	CENTER BELOW INTERPOLATED CI		
5	30.0	4.0	35.0	26.0	CIRCLE OUTSIDE SLOPE		
6	30.0	12.0	33.0	18.0	2.687	2.583	1.64
7	30.0	14.0	35.0	16.0	2.563	2.495	1.648
8	30.0	12.0	37.0	18.0	2.291	2.218	1.41
9	30.0	10.0	35.0	20.0	2.084	1.995	1.152
10	30.0	10.0	33.0	20.0	2.475	2.347NEG.RESIST	
11	30.0	10.0	37.0	20.0	1.980	1.899	1.097
12	30.0	8.0	35.0	22.0	CENTER BELOW INTERPOLATED CI		
13	30.0	12.0	37.0	18.0	2.291	2.218	1.41
14	30.0	10.0	39.0	20.0	2.084	1.995	1.152
15	30.0	8.0	37.0	22.0	CENTER BELOW INTERPOLATED CI		
16	30.0	12.0	35.0	18.0	2.379	2.300	1.46
17	30.0	12.0	39.0	18.0	2.379	2.300	1.46
18	30.0	8.0	39.0	22.0	CENTER BELOW INTERPOLATED CI		
19	30.0	8.0	35.0	22.0	CENTER BELOW INTERPOLATED CI		

0F.S MINIMUM= 1.980 FOR THE CIRCLE OF CENTER (37.0, 20.0)

0 BISHOP MODIFIED AND/OR ORDINARY METHOD OF SLICES

0permafrost depth 5 feet, 20 feet from centerline

0NUMBER	TANGENT	RADIUS	(X) CENTER	(Y) CENTER	FS(BISHOP)	FS(OMS)	dFS(BS.
1	35.0	13.0	35.0	22.0	CENTER BELOW INTERPOLATED CI		
2	35.0	13.0	31.0	22.0	CENTER BELOW INTERPOLATED CI		
3	35.0	17.0	35.0	18.0	5.442	4.951	.61
4	35.0	13.0	39.0	22.0	CENTER BELOW INTERPOLATED C		
5	35.0	9.0	35.0	26.0	CENTER BELOW RIGHT INTERSEC		
6	35.0	17.0	33.0	19.0	7.086	6.374	.62
7	35.0	19.0	35.0	16.0	5.780	5.301	.72
8	35.0	17.0	37.0	18.0	3.236	2.762	.62
9	35.0	15.0	35.0	20.0	4.377	4.301	.47
10	35.0	19.0	37.0	16.0	4.084	3.874	.73
11	35.0	17.0	39.0	18.0	1.474	1.419	.67
12	35.0	15.0	37.0	20.0	1.298	1.280	.47
13	35.0	13.0	35.0	20.0	4.377	4.301	.47
14	35.0	15.0	39.0	20.0	1.303	1.265	.44
15	35.0	13.0	37.0	22.0	CENTER BELOW INTERPOLATED C		
16	35.0	17.0	35.0	18.0	5.442	4.951	.61
17	35.0	17.0	39.0	18.0	1.474	1.419	.67
18	35.0	13.0	39.0	22.0	CENTER BELOW INTERPOLATED C		
19	35.0	13.0	35.0	22.0	CENTER BELOW INTERPOLATED C		

0F.S. MINIMUM= 1.298 FOR THE CIRCLE OF CENTER (37.0, 20.0)

Program STABR -- Version 2.34 (MS-DOS)

BISHOP MODIFIED AND/OR ORDINARY METHOD OF SLICES

permafrost depth 5 feet, 20 feet from centerline

CONTROL DATA

NUMBER OF SPECIFIED CENTERS	0
NUMBER OF DEPTH LIMITING TANGENTS	3
NUMBER OF VERTICAL SECTIONS	12
NUMBER OF SOIL LAYER BOUNDARIES	5
NUMBER OF PORE PRESSURE LINES	0
NUMBER OF POINTS DEFINING COHESION PROFILE	0

SEISMIC COEFFICIENT S1,S2 = .00, .00

UNIT WEIGHT OF WATER = 62.40

SEARCH IS BASED ON BISHOP MODIFIED METHOD

SEARCH STARTS AT CENTER (37.0, 22.0) WITH FINAL GRID OF 2.0

ALL CIRCLES TANGENT TO DEPTH, 28.0, 30.0, 35.0,

GEOMETRY

SECTIONS	.0	20.0	23.0	25.0	30.0	32.0	42.0	54.0	59.0	61.0	64.0
T. CRACKS	20.0	20.0	20.0	20.0	20.0	20.0	25.0	25.0	25.0	23.0	25.0
W IN CRACK	20.0	20.0	20.0	20.0	20.0	20.0	25.0	25.0	25.0	25.0	25.0
BOUNDARY 1	20.0	20.0	20.0	20.0	20.0	20.0	25.0	25.0	25.0	25.0	25.0
BOUNDARY 2	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0
BOUNDARY 3	35.0	35.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	35.0
BOUNDARY 4	35.0	35.0	28.0	30.0	35.0	35.0	35.0	35.0	30.0	28.0	35.0
BOUNDARY 5	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0

REINFORCING FORCE DATA AT 4 LEVEL(s)

Y= 20.50 NO. OF FORCE POINTS= 4

X	FORCE
33.0	.0
30.0	1666.0
3.0	1666.0
.0	.0

Y= 22.00 NO. OF FORCE POINTS= 4

X	FORCE
36.0	.0
33.0	5000.0
3.0	5000.0
.0	.0

Y= 24.00 NO. OF FORCE POINTS= 4

X	FORCE
40.0	.0
37.0	5000.0
3.0	5000.0
.0	.0

Y=	25.00	NO. OF FORCE POINTS=	4
	X	FORCE	
	42.0	.0	
	39.0	5000.0	
	3.0	3000.0	
	.0	.0	

SOIL PROPERTIES

LAYER	COHESION	FRICTION ANGLE	DENSITY
1	.0	35.0	135.0
2	1000.0	40.0	120.0
3	100.0	.0	105.0
4	1000.0	40.0	120.0

BISHOP MODIFIED AND/OR ORDINARY METHOD OF SLICES

permafrost depth 5 feet, 20 feet from centerline

NUMBER	TANGENT	RADIUS	(X) CENTER	(Y) CENTER	FS(BISHOP)	FS(OMS)	dFS(BS)
1	28.0	6.0	37.0	22.0	CENTER BELOW INTERPOLATED CR		
2	28.0	6.0	33.0	22.0	CENTER BELOW INTERPOLATED CR		
3	28.0	10.0	37.0	18.0	4.778	4.679	3.811
4	28.0	6.0	41.0	22.0	CENTER BELOW INTERPOLATED CRA		
5	28.0	2.0	37.0	26.0	CIRCLE OUTSIDE SLOPE		
6	28.0	10.0	35.0	18.0	5.081	4.965	4.044
7	28.0	12.0	37.0	16.0	4.962	4.883	3.974
8	28.0	10.0	39.0	18.0	5.081	4.965	4.045
9	28.0	8.0	37.0	20.0	4.473	4.349	3.496
10	28.0	8.0	35.0	20.0	4.897	4.722	3.795
11	28.0	8.0	39.0	20.0	4.876	4.727	3.799
12	28.0	6.0	37.0	22.0	CENTER BELOW INTERPOLATED CRA		
13	28.0	10.0	35.0	18.0	5.081	4.965	4.044
14	28.0	10.0	39.0	18.0	5.081	4.965	4.045
15	28.0	6.0	39.0	22.0	CENTER BELOW INTERPOLATED CRA		
16	28.0	6.0	35.0	22.0	CENTER BELOW INTERPOLATED CR		

F.S. MINIMUM= 4.473 FOR THE CIRCLE OF CENTER (37.0, 20.0)

BISHOP MODIFIED AND/OR ORDINARY METHOD OF SLICES

permafrost depth 5 feet, 20 feet from centerline

NUMBER	TANGENT	RADIUS	(X) CENTER	(Y) CENTER	FS(BISHOP)	FS(OMS)	dFS(BS)
1	30.0	8.0	35.0	22.0	CENTER BELOW INTERPOLATED CR		
2	30.0	8.0	31.0	22.0	CENTER BELOW INTERPOLATED CR		
3	30.0	12.0	35.0	18.0	3.328	3.249	2.418
4	30.0	8.0	39.0	22.0	CENTER BELOW INTERPOLATED CR		
5	30.0	4.0	35.0	26.0	CIRCLE OUTSIDE SLOPE		
6	30.0	12.0	33.0	18.0	3.733	3.649	2.718
7	30.0	14.0	35.0	16.0	3.520	3.452	2.606
8	30.0	12.0	37.0	18.0	3.206	3.134	2.337
9	30.0	10.0	35.0	20.0	3.019	2.929	2.086
10	30.0	10.0	33.0	20.0	3.574	3.347NEG.RESIST.	
11	30.0	10.0	37.0	20.0	2.869	2.799	1.984
12	30.0	8.0	35.0	22.0	CENTER BELOW INTERPOLATED CR		
13	30.0	12.0	37.0	18.0	3.206	3.134	2.332
14	30.0	10.0	39.0	20.0	3.019	2.929	2.086
15	30.0	8.0	37.0	22.0	CENTER BELOW INTERPOLATED CR		
16	30.0	12.0	35.0	18.0	3.328	3.249	2.418

17	30.0	12.0	39.0	18.0	3.328	3.249	2.417
18	30.0	8.0	39.0	22.0	CENTER BELOW INTERPOLATED CR		
19	30.0	8.0	35.0	22.0	CENTER BELOW INTERPOLATED CR		

F.S. MINIMUM= 2.869 FOR THE CIRCLE OF CENTER (37.0, 20.0)

BISHOP MODIFIED AND/OR ORDINARY METHOD OF SLICES

permafrost depth 5 feet, 20 feet from centerline

NUMBER	TANGENT	RADIUS	(X) CENTER	(Y) CENTER	FS(BISHOP)	FS(OMS)	dFS(BS)
1	35.0	13.0	35.0	22.0	CENTER BELOW INTERPOLATED CR		
2	35.0	13.0	31.0	22.0	CENTER BELOW INTERPOLATED CR		
3	35.0	17.0	35.0	18.0	5.838	5.347	1.008
4	35.0	13.0	39.0	22.0	CENTER BELOW INTERPOLATED CR		
5	35.0	9.0	35.0	26.0	CENTER BELOW RIGHT INTERSECT		
6	35.0	17.0	33.0	18.0	7.489	6.778	1.027
7	35.0	19.0	35.0	16.0	6.202	5.722	1.148
8	35.0	17.0	37.0	18.0	2.656	2.763	1.020
9	35.0	15.0	35.0	20.0	5.333	4.857	.795
10	35.0	19.0	37.0	16.0	4.511	4.301	1.162
11	35.0	17.0	39.0	18.0	1.882	1.837	1.039
12	35.0	15.0	37.0	20.0	1.654	1.644	.795
13	35.0	15.0	35.0	20.0	5.333	4.857	.795
14	35.0	15.0	39.0	20.0	1.671	1.628	.810
15	35.0	13.0	37.0	22.0	CENTER BELOW INTERPOLATED CR		
16	35.0	17.0	35.0	18.0	5.838	5.347	1.008
17	35.0	17.0	39.0	18.0	1.882	1.837	1.039
18	35.0	13.0	39.0	22.0	CENTER BELOW INTERPOLATED CR		
19	35.0	13.0	35.0	22.0	CENTER BELOW INTERPOLATED CR		

F.S. MINIMUM= 1.654 FOR THE CIRCLE OF CENTER (37.0, 20.0)

APPENDIX B

RESULTS OF STABGM ANALYSIS

Figure 2.5 depicts the conditions of the revised STABGM analysis. Detailed results of the revised analysis are contained herein. Analysis with no layers of reinforcement display the critical factor of safety exists at a depth of 10 feet below the embankment/foundation soil interface. Analyses with one layer of reinforcement are enclosed. Strengths of 5,000, 7,000, 9,000, and 8,000 pounds per foot were analyzed to obtain a minimum factor of safety of 1.0 at a strength of 8,000 pounds per foot. Analyses with two and three layers of reinforcement are also enclosed. Internal stability analyses with none, one, two, and three layers of reinforcement are enclosed for comparison with external stability analyses.

Program STABR -- Version 2.94 (MS-DOS)

BISHOP MODIFIED AND/OR ORDINARY METHOD OF SLICES

permafrost depth 7 feet, 10 feet from centerline

CONTROL DATA

NUMBER OF SPECIFIED CENTERS	0
NUMBER OF DEPTH LIMITING TANGENTS	3
NUMBER OF VERTICAL SECTIONS	12
NUMBER OF SOIL LAYER BOUNDARIES	5
NUMBER OF PORE PRESSURE LINES	0
NUMBER OF POINTS DEFINING COHESION PROFILE	0

SEISMIC COEFFICIENT S1,S2 = .00, .00

UNIT WEIGHT OF WATER = 62.40

SEARCH IS BASED ON BISHOP MODIFIED METHOD

SEARCH STARTS AT CENTER (37.0, 22.0) WITH FINAL GRID OF 2.0

ALL CIRCLES TANGENT TO DEPTH, 28.0, 30.0, 35.0,

GEOMETRY

SECTIONS	.0	10.0	13.0	15.0	20.0	32.0	42.0	64.0	69.0	71.0	74.0
T. CRACKS	18.0	18.0	18.0	18.0	18.0	18.0	25.0	25.0	25.0	25.0	25.0
W IN CRACK	18.0	18.0	18.0	18.0	18.0	18.0	25.0	25.0	25.0	25.0	25.0
BOUNDARY 1	18.0	18.0	18.0	18.0	18.0	18.0	25.0	25.0	25.0	25.0	25.0
BOUNDARY 2	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0
BOUNDARY 3	35.0	35.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	35.0
BOUNDARY 4	35.0	35.0	28.0	30.0	35.0	35.0	35.0	35.0	30.0	28.0	35.0
BOUNDARY 5	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0

REINFORCING FORCE DATA AT 0 LEVEL(s)

SOIL PROPERTIES

LAYER	COHESION	FRICTION ANGLE	DENSITY
1	.0	35.0	135.0
2	1000.0	40.0	120.0
3	100.0	.0	105.0
4	1000.0	40.0	120.0

BISHOP MODIFIED AND/OR ORDINARY METHOD OF SLICES

permafrost depth 7 feet, 10 feet from centerline

NUMBER	TANGENT	RADIUS	(X) CENTER	(Y) CENTER	FS(BISHOP)	FS(OMS)	dFS(BS)
1	28.0	6.0	37.0	22.0	CENTER BELOW INTERPOLATED CR		
2	28.0	6.0	33.0	22.0	CENTER BELOW INTERPOLATED CR		
3	28.0	10.0	37.0	18.0	.719	.643	.000
4	28.0	6.0	41.0	22.0	CENTER BELOW INTERPOLATED CR		
5	28.0	2.0	37.0	26.0	CIRCLE OUTSIDE SLOPE		
6	28.0	10.0	35.0	18.0	.772	.679	.000
7	28.0	12.0	37.0	16.0	.710	.482	.000
8	28.0	10.0	39.0	18.0	.772	.679	.000

9	28.0	8.0	37.0	20.0	CENTER BELOW	INTERPOLATED CR	
10	28.0	12.0	35.0	16.0	.779	.710	.000
11	28.0	12.0	39.0	16.0	.779	.710	.000
12	28.0	8.0	39.0	20.0	CENTER BELOW	INTERPOLATED CR	
13	28.0	8.0	35.0	20.0	CENTER BELOW	INTERPOLATED CR	

F.S. MINIMUM= .719 FOR THE CIRCLE OF CENTER (37.0, 18.0)

BISHOP MODIFIED AND/OR ORDINARY METHOD OF SLICES

permafrost depth 7 feet, 10 feet from centerline

NUMBER	TANGENT	RADIUS	(X) CENTER	(Y) CENTER	FS(BISHOP)	FS(OMS)	dFS(BS)
1	30.0	10.0	35.0	20.0	CENTER BELOW	INTERPOLATED CR.	
2	30.0	10.0	31.0	20.0	CENTER BELOW	INTERPOLATED CR.	
3	30.0	14.0	35.0	16.0	.668	.616	.000
4	30.0	10.0	39.0	20.0	CENTER BELOW	INTERPOLATED CR.	
5	30.0	6.0	35.0	24.0	CENTER BELOW	INTERPOLATED CR	
6	30.0	14.0	33.0	16.0	.739	.670	.000
7	30.0	16.0	35.0	14.0	.682	.642	.000
8	30.0	14.0	37.0	16.0	.646	.600	.000
9	30.0	12.0	35.0	18.0	.663	.600	.000
10	30.0	16.0	37.0	14.0	.665	.628	.000
11	30.0	14.0	39.0	16.0	.668	.616	.000
12	30.0	12.0	37.0	18.0	.636	.580	.000
13	30.0	12.0	35.0	18.0	.663	.600	.000
14	30.0	12.0	39.0	18.0	.663	.600	.000
15	30.0	10.0	37.0	20.0	CENTER BELOW	INTERPOLATED CR	
16	30.0	14.0	35.0	16.0	.668	.616	.000
17	30.0	14.0	39.0	16.0	.668	.616	.000
18	30.0	10.0	39.0	20.0	CENTER BELOW	INTERPOLATED CR	
19	30.0	10.0	35.0	20.0	CENTER BELOW	INTERPOLATED CR	

F.S. MINIMUM= .636 FOR THE CIRCLE OF CENTER (37.0, 18.0)

BISHOP MODIFIED AND/OR ORDINARY METHOD OF SLICES

permafrost depth 7 feet, 10 feet from centerline

NUMBER	TANGENT	RADIUS	(X) CENTER	(Y) CENTER	FS(BISHOP)	FS(OMS)	dFS(BS)
1	35.0	15.0	35.0	20.0	CENTER BELOW	INTERPOLATED CR	
2	35.0	15.0	31.0	20.0	CENTER BELOW	INTERPOLATED CR	
3	35.0	19.0	35.0	16.0	.601	.566	.000
4	35.0	15.0	39.0	20.0	CENTER BELOW	INTERPOLATED CR	
5	35.0	11.0	35.0	24.0	CENTER BELOW	INTERPOLATED CR	
6	35.0	19.0	33.0	16.0	.628	.589	.000
7	35.0	21.0	35.0	14.0	.603	.572	.000
8	35.0	19.0	37.0	16.0	.593	.559	.000
9	35.0	17.0	35.0	18.0	.605	.567	.000
10	35.0	21.0	37.0	14.0	.596	.565	.000
11	35.0	19.0	39.0	16.0	.601	.566	.000
12	35.0	17.0	37.0	18.0	.595	.559	.000
13	35.0	21.0	35.0	14.0	.603	.572	.000
14	35.0	21.0	39.0	14.0	.603	.572	.000
15	35.0	17.0	39.0	18.0	.605	.567	.000
16	35.0	17.0	35.0	18.0	.605	.567	.000

F.S. MINIMUM= .593 FOR THE CIRCLE OF CENTER (37.0, 16.0)

CRITICAL FACTOR OF SAFETY - 10 FEET BELOW BOTTOM OF EMBANKME

Program STABR -- Version 2.84 (MS-DOS)

BISHOP MODIFIED AND/OR ORDINARY METHOD OF SLICES

permafrost depth 7 feet, 10 feet from centerline

CONTROL DATA

NUMBER OF SPECIFIED CENTERS	0
NUMBER OF DEPTH LIMITING TANGENTS	3
NUMBER OF VERTICAL SECTIONS	12
NUMBER OF SOIL LAYER BOUNDARIES	5
NUMBER OF PORE PRESSURE LINES	0
NUMBER OF POINTS DEFINING COHESION PROFILE	0

SEISMIC COEFFICIENT S1,S2 = .00, .00

UNIT WEIGHT OF WATER = 62.40

SEARCH IS BASED ON BISHOP MODIFIED METHOD

SEARCH STARTS AT CENTER (37.0, 22.0) WITH FINAL GRID OF 2.0

ALL CIRCLES TANGENT TO DEPTH, 28.0, 30.0, 35.0,

GEOMETRY

SECTIONS	.0	10.0	13.0	15.0	20.0	32.0	42.0	64.0	69.0	71.0	74.0
T. CRACKS	18.0	18.0	18.0	18.0	18.0	18.0	25.0	25.0	25.0	25.0	25.0
W IN CRACK	18.0	18.0	18.0	18.0	18.0	19.0	25.0	25.0	25.0	25.0	25.0
BOUNDARY 1	18.0	18.0	18.0	18.0	18.0	18.0	25.0	25.0	25.0	25.0	25.0
BOUNDARY 2	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0
BOUNDARY 3	35.0	35.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	35.0
BOUNDARY 4	35.0	35.0	28.0	30.0	35.0	35.0	35.0	35.0	30.0	28.0	35.0
BOUNDARY 5	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0

REINFORCING FORCE DATA AT 1 LEVEL(s)

Y= 25.00 NO. OF FORCE POINTS- 4

X	FORCE
42.0	.0
39.0	5000.0
3.0	5000.0
.0	.0

SOIL PROPERTIES

LAYER	COHESION	FRICTION ANGLE	DENSITY
1	.0	35.0	135.0
2	1000.0	40.0	120.0
3	100.0	.0	145.0
4	1000.0	40.0	120.0

BISHOP MODIFIED AND/OR ORDINARY METHOD OF SLICES

permafrost depth 7 feet, 10 feet from centerline

NUMBER TANGENT RADIUS (X) CENTER (Y) CENTER FS(BISHOP) FS(OMS) dFS/B[illegible]

1	28.0	6.0	37.0	22.0	CENTER BELOW INTERPOLATED CF		
2	28.0	6.0	33.0	22.0	CENTER BELOW INTERPOLATED CF		
3	28.0	10.0	37.0	18.0	1.703	1.627	.984
4	28.0	6.0	41.0	22.0	CENTER BELOW INTERPOLATED CF		
5	28.0	2.0	37.0	26.0	CIRCLE OUTSIDE SLOPE		
6	28.0	10.0	35.0	18.0	1.811	1.718	1.039
7	28.0	12.0	37.0	16.0	1.680	1.622	.940
8	28.0	10.0	39.0	18.0	1.811	1.718	1.039
9	28.0	8.0	37.0	20.0	CENTER BELOW INTERPOLATED CF		
10	28.0	12.0	35.0	16.0	1.758	1.688	.979
11	28.0	14.0	37.0	14.0	1.685	1.641	.914
12	28.0	12.0	39.0	16.0	1.758	1.688	.979
13	28.0	14.0	35.0	14.0	1.747	1.695	.944
14	28.0	14.0	39.0	14.0	1.747	1.695	.944
15	28.0	10.0	39.0	18.0	1.811	1.718	1.039
16	28.0	10.0	35.0	18.0	1.811	1.718	1.039

F.S. MINIMUM= 1.680 FOR THE CIRCLE OF CENTER (37.0, 16.0)

BISHOP MODIFIED AND/OR ORDINARY METHOD OF SLICES

permafrost depth 5 feet, 10 feet from centerline

NUMBER	TANGENT	RADIUS	(X) CENTER	(Y) CENTER	FS(BISHOP)	FS(OMS)	dFS(BS)
1	30.0	12.0	35.0	18.0	1.305	1.243	.643
2	30.0	12.0	31.0	18.0	1.842	1.699NEG.RESIST.	
3	30.0	16.0	35.0	14.0	1.317	1.277	.635
4	30.0	12.0	39.0	18.0	1.305	1.243	.643
5	30.0	8.0	35.0	22.0	CENTER BELOW INTERPOLATED CR		
6	30.0	12.0	33.0	18.0	1.474	1.387	.717
7	30.0	10.0	35.0	20.0	CENTER BELOW INTERPOLATED CR		
8	30.0	14.0	33.0	16.0	1.433	1.364	.694
9	30.0	14.0	37.0	16.0	1.268	1.222	.621
10	30.0	10.0	37.0	20.0	CENTER BELOW INTERPOLATED CR.		
11	30.0	10.0	33.0	20.0	CENTER BELOW INTERPOLATED CR		
12	30.0	16.0	37.0	14.0	1.286	1.249	.621
13	30.0	14.0	39.0	16.0	1.306	1.254	.633
14	30.0	16.0	33.0	14.0	1.317	1.277	.635
15	30.0	16.0	39.0	14.0	1.317	1.277	.635
16	30.0	12.0	39.0	18.0	1.305	1.243	.643
17	30.0	12.0	35.0	18.0	1.305	1.243	.643

F.S. MINIMUM= 1.268 FOR THE CIRCLE OF CENTER (37.0, 16.0)

BISHOP MODIFIED AND/OR ORDINARY METHOD OF SLICES

permafrost depth 3 feet, 10 feet from centerline

NUMBER	TANGENT	RADIUS	(X) CENTER	(Y) CENTER	FS(BISHOP)	FS(OMS)	dFS(BS)
1	35.0	17.0	35.0	18.0	.939	.882	.292
2	35.0	17.0	31.0	18.0	1.027	.971	.322
3	35.0	21.0	35.0	14.0	[illegible]	.939	.316
4	35.0	17.0	39.0	18.0	.899	.882	.285
5	35.0	13.0	35.0	22.0	CENTER BELOW INTERPOLATED CR		
6	35.0	17.0	33.0	18.0	.973	.877	.29
7	35.0	19.0	37.0	16.0	[illegible]	.859	[illegible]
8	35.0	17.0	41.0	18.0	.922	.897	.298
9	35.0	15.0	39.0	20.0	CENTER BELOW INTERPOLATED CR		
10	35.0	17.0	35.0	18.0	.887	.852	.285
11	35.0	19.0	37.0	16.0	.891	.853	.299
12	35.0	15.0	37.0	20.0	CENTER BELOW INTERPOLATED CR		
13	35.0	19.0	35.0	16.0	.904	.869	.303

14	35.0	19.0	39.0	16.0	.904	.869	.30[illegible]
15	35.0	15.0	39.0	20.0	CENTER BELOW INTERPOLATED CF		
16	35.0	15.0	35.0	20.0	CENTER BELOW INTERPOLATED CF		

F.S. MINIMUM= .875 FOR THE CIRCLE OF CENTER (37.0, 18.0)

Program STABR -- Version 2.84 (MS-DOS)

BISHOP MODIFIED AND/OR ORDINARY METHOD OF SLICES

permafrost depth 7 feet, 10 feet from centerline

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CONTROL DATA
     NUMBER OF SPECIFIED CENTERS                       0
     NUMBER OF DEPTH LIMITING TANGENTS                 1
     NUMBER OF VERTICAL SECTIONS                      12
     NUMBER OF SOIL LAYER BOUNDARIES                   5
     NUMBER OF PORE PRESSURE LINES                     0
     NUMBER OF POINTS DEFINING COHESION PROFILE        0

SEISMIC COEFFICIENT S1,S2    =    .00,  .00

UNIT WEIGHT OF WATER         =      62.40

 SEARCH IS BASED ON BISHOP MODIFIED METHOD

SEARCH STARTS AT CENTER (  37.0,  22.0) WITH FINAL GRID OF  2.0

ALL CIRCLES TANGENT TO DEPTH,  35.0,
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GEOMETRY

SECTIONS	.0	10.0	13.0	15.0	20.0	32.0	42.0	64.0	69.0	71.0	74.0
T. CRACKS	18.0	18.0	18.0	18.0	18.0	18.0	25.0	25.0	25.0	25.0	25.0
W IN CRACK	18.0	18.0	18.0	18.0	18.0	18.0	25.0	25.0	25.0	25.0	25.0
BOUNDARY 1	18.0	18.0	18.0	18.0	18.0	18.0	25.0	25.0	25.0	25.0	25.0
BOUNDARY 2	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0
BOUNDARY 3	35.0	35.0	25.0	25.0	25.0	25.0	25.0	25.0	35.0	25.0	35.0
BOUNDARY 4	35.0	35.0	28.0	30.0	35.0	35.0	35.0	35.0	30.0	28.0	35.0
BOUNDARY 5	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0

REINFORCING FORCE DATA AT 1 LEVEL /

```
Y=     25.00       NO. OF FORCE POINTS=  4
          X          FORCE
        42.0            .0
        39.0        7000.0
         3.0        7000.0
          .0            .0
```

SOIL PROPERTIES

LAYER	COHESION	FRICTION ANGLE	DENSITY
1	.0	35.0	[illegible]
2	1000.0	40.0	120.0
3	100.0	.0	[illegible]
4	1000.0	40.0	120.0

BISHOP MODIFIED AND/OR ORDINARY METHOD OF SLICES

permafrost depth 7 feet, 10 feet from centerline

NUMBER   TANGENT   RADIUS   (X) CENTER   (Y) CENTER   FS BISHOP)   FS(OMS)   dFS/DS

1	35.0	13.0	37.0	22.0	CENTER BELOW INTERPOLATED CF		
2	35.0	13.0	33.0	22.0	CENTER BELOW INTERPOLATED CF		
3	35.0	17.0	37.0	18.0	.987	.951	.393
4	35.0	13.0	41.0	22.0	CENTER BELOW INTERPOLATED CF		
5	35.0	9.0	37.0	26.0	CENTER BELOW RIGHT INTERSECT		
6	35.0	17.0	35.0	18.0	1.003	.966	.399
7	35.0	19.0	37.0	16.0	1.012	.978	.417
8	35.0	17.0	39.0	18.0	1.003	.966	.399
9	35.0	15.0	37.0	20.0	CENTER BELOW INTERPOLATED CF		
10	35.0	19.0	35.0	16.0	1.026	.990	.42[illegible]
11	35.0	19.0	39.0	16.0	1.026	.990	.424
12	35.0	15.0	39.0	20.0	CENTER BELOW INTERPOLATED CF		
13	35.0	15.0	35.0	20.0	CENTER BELOW INTERPOLATED CF		

F.S. MINIMUM= .987 FOR THE CIRCLE OF CENTER (37.0, 18.0)

Program STABR -- Version 2.84 (MS-DOS)

BISHOP MODIFIED AND/OR ORDINARY METHOD OF SLICES

permafrost depth 7 feet, 10 feet from centerline

CONTROL DATA

NUMBER OF SPECIFIED CENTERS	0
NUMBER OF DEPTH LIMITING TANGENTS	1
NUMBER OF VERTICAL SECTIONS	12
NUMBER OF SOIL LAYER BOUNDARIES	5
NUMBER OF PORE PRESSURE LINES	0
NUMBER OF POINTS DEFINING COHESION PROFILE	0

SEISMIC COEFFICIENT S1,S2 = .00, .00

UNIT WEIGHT OF WATER = 62.40

SEARCH IS BASED ON BISHOP MODIFIED METHOD

SEARCH STARTS AT CENTER (37.0, 22.0) WITH FINAL GRID OF 2.0

ALL CIRCLES TANGENT TO DEPTH, 35.0,

GEOMETRY

SECTIONS	.0	10.0	13.0	15.0	20.0	32.0	42.0	64.0	69.0	71.0	74.0
T. CRACKS	18.0	18.0	18.0	18.0	18.0	18.0	25.0	25.0	25.0	25.0	25.0
W IN CRACK	18.0	18.0	18.0	18.0	18.0	18.0	25.0	25.0	25.0	25.0	25.0
BOUNDARY 1	18.0	18.0	18.0	18.0	18.0	18.0	25.0	25.0	25.0	25.0	25.0
BOUNDARY 2	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0
BOUNDARY 3	35.0	35.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	35.0
BOUNDARY 4	35.0	35.0	28.0	30.0	35.0	35.0	35.0	35.0	30.0	28.0	35.0
BOUNDARY 5	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0

REINFORCING FORCE DATA AT 1 LEVEL(s)

Y= 25.00 NO. OF FORCE POINTS= 4

X	FORCE
40.0	.0
39.0	9000.0
3.0	9000.0
.0	.0

SOIL PROPERTIES

LAYER	COHESION	FRICTION ANGLE	DENSITY
1	.0	35.0	135.0
2	1000.0	40.0	120.0
3	100.0	.0	105.0
4	1000.0	40.0	120.0

BISHOP MODIFIED AND/OR ORDINARY METHOD OF SLICES

permafrost depth 7 feet, 10 feet from centerline

NUMBER TANGENT RADIUS (X) CENTER (Y) CENTER FS(BISHOP) FS(OMS) dFS(DS)

1	35.0	13.0	37.0	22.0	CENTER BELOW INTERPOLATED CF		
2	35.0	13.0	33.0	22.0	CENTER BELOW INTERPOLATED CF		
3	35.0	17.0	37.0	18.0	1.099	1.063	.505
4	35.0	13.0	41.0	22.0	CENTER BELOW INTERPOLATED CF		
5	35.0	9.0	37.0	26.0	CENTER BELOW RIGHT INTERSECT		
6	35.0	17.0	35.0	18.0	1.117	1.080	.513
7	35.0	19.0	37.0	16.0	1.133	1.097	.529
8	35.0	17.0	39.0	18.0	1.117	1.080	.513
9	35.0	15.0	37.0	20.0	CENTER BELOW INTERPOLATED CF		
10	35.0	19.0	35.0	16.0	1.147	1.111	.546
11	35.0	19.0	39.0	16.0	1.147	1.111	.546
12	35.0	15.0	39.0	20.0	CENTER BELOW INTERPOLATED CF		
13	35.0	15.0	35.0	20.0	CENTER BELOW INTERPOLATED CF		

F.S. MINIMUM= 1.099 FOR THE CIRCLE OF CENTER (37.0, 18.0)

Program STABR -- Version 2.84 (MS-DOS)

BISHOP MODIFIED AND/OR ORDINARY METHOD OF SLICES

permafrost depth 7 feet, 10 feet from centerline

CONTROL DATA

NUMBER OF SPECIFIED CENTERS	0
NUMBER OF DEPTH LIMITING TANGENTS	1
NUMBER OF VERTICAL SECTIONS	12
NUMBER OF SOIL LAYER BOUNDARIES	5
NUMBER OF PORE PRESSURE LINES	0
NUMBER OF POINTS DEFINING COHESION PROFILE	0

SEISMIC COEFFICIENT S1,S2 = .00, .00

UNIT WEIGHT OF WATER = 62.40

SEARCH IS BASED ON BISHOP MODIFIED METHOD

SEARCH STARTS AT CENTER (37.0, 22.0) WITH FINAL GRID OF 2.0

ALL CIRCLES TANGENT TO DEPTH, 35.0,

GEOMETRY

SECTIONS	.0	10.0	13.0	15.0	20.0	32.0	42.0	64.0	69.0	71.0	74.0
T. CRACKS	18.0	18.0	18.0	18.0	18.0	18.0	25.0	25.0	25.0	25.0	25.0
W IN CRACK	18.0	18.0	18.0	18.0	18.0	18.0	25.0	25.0	25.0	25.0	25.0
BOUNDARY 1	18.0	18.0	18.0	18.0	18.0	19.0	25.0	25.0	25.0	25.0	25.0
BOUNDARY 2	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0
BOUNDARY 3	35.0	35.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	35.0
BOUNDARY 4	35.0	35.0	28.0	30.0	35.0	35.0	35.0	35.0	30.0	28.0	35.0
BOUNDARY 5	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0

REINFORCING FORCE DATA AT 1 LEVEL(s)

Y= 25.00 NO. OF FORCE POINTS= 4

X	FORCE
42.0	.0
39.0	8000.0
3.0	8000.0
.0	.0

SOIL PROPERTIES

LAYER	COHESION	FRICTION ANGLE	DENSITY
1	.0	35.0	[illegible]
2	1000.0	40.0	120.0
3	100.0	.0	105.0
4	1000.0	40.0	[illegible]

BISHOP MODIFIED AND/OR ORDINARY METHOD OF SLICES

permafrost depth 7 feet, 10 feet from centerline

NUMBER	TANGENT	RADIUS	(X) CENTER	(Y) CENTER	FS(BISHOP)	FS(OMS)	dFS(Ba)

1	35.0	13.0	37.0	22.0	CENTER BELOW INTERPOLATED CR		
2	35.0	13.0	33.0	22.0	CENTER BELOW INTERPOLATED CR		
3	35.0	17.0	37.0	18.0	1.043	1.007	.449
4	35.0	13.0	41.0	22.0	CENTER BELOW INTERPOLATED CR		
5	35.0	9.0	37.0	26.0	CENTER BELOW RIGHT INTERSECT		
6	35.0	17.0	35.0	18.0	1.060	1.023	.456
7	35.0	19.0	37.0	16.0	1.072	1.038	.475
8	35.0	17.0	39.0	18.0	1.060	1.023	.456
9	35.0	15.0	37.0	20.0	CENTER BELOW INTERPOLATED CR		
10	35.0	19.0	35.0	16.0	1.086	1.051	.485
11	35.0	19.0	39.0	16.0	1.086	1.051	.485
12	35.0	15.0	39.0	20.0	CENTER BELOW INTERPOLATED CR		
13	35.0	15.0	35.0	20.0	CENTER BELOW INTERPOLATED CR		

F.S. MINIMUM= 1.043 FOR THE CIRCLE OF CENTER (37.0, 18.0)

Program STABR -- Version 2.84 (MS-DOS)

BISHOP MODIFIED AND/OR ORDINARY METHOD OF SLICES

permafrost depth 7 feet, 10 feet from centerline

CONTROL DATA

NUMBER OF SPECIFIED CENTERS	0
NUMBER OF DEPTH LIMITING TANGENTS	3
NUMBER OF VERTICAL SECTIONS	12
NUMBER OF SOIL LAYER BOUNDARIES	5
NUMBER OF PORE PRESSURE LINES	0
NUMBER OF POINTS DEFINING COHESION PROFILE	0

SEISMIC COEFFICIENT S1,S2 = .00, .00

UNIT WEIGHT OF WATER = 62.40

SEARCH IS BASED ON BISHOP MODIFIED METHOD

SEARCH STARTS AT CENTER (37.0, 22.0) WITH FINAL GRID OF 2.0

ALL CIRCLES TANGENT TO DEPTH, 28.0, 30.0, 35.0,

GEOMETRY

SECTIONS	.0	10.0	13.0	15.0	20.0	32.0	42.0	64.0	69.0	71.0	74.0
T. CRACKS	18.0	18.0	18.0	18.0	18.0	18.0	25.0	25.0	25.0	25.0	25.0
W IN CRACK	18.0	18.0	18.0	18.0	18.0	18.0	25.0	25.0	25.0	25.0	25.0
BOUNDARY 1	18.0	18.0	18.0	18.0	18.0	18.0	25.0	25.0	25.0	25.0	25.0
BOUNDARY 2	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0
BOUNDARY 3	35.0	35.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	35.0
BOUNDARY 4	35.0	35.0	28.0	30.0	35.0	35.0	35.0	35.0	30.0	28.0	35.0
BOUNDARY 5	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0

REINFORCING FORCE DATA AT 2 LEVEL(s)

Y= 22.00 NO. OF FORCE POINTS= 4

X	FORCE
37.7	.0
34.0	5000.0
3.0	5000.0
.0	.0

Y= 25.00 NO. OF FORCE POINTS= 4

X	FORCE
42.0	.0
39.0	5000.0
7.0	5000.0
.0	.0

SOIL PROPERTIES

LAYER	COHESION	FRICTION ANGLE	DENSITY
1	.0	35.0	135.0
2	1000.0	40.0	120.0
3	100.0	.0	125.0

4	1000.0	40.0	120.0

BISHOP MODIFIED AND/OR ORDINARY METHOD OF SLICES

permafrost depth 7 feet, 10 feet from centerline

NUMBER	TANGENT	RADIUS	(X) CENTER	(Y) CENTER	FS(BISHOP)	FS(OMS)	dFS(BS
1	28.0	6.0	37.0	22.0	CENTER BELOW INTERPOLATED CR		
2	28.0	6.0	33.0	22.0	CENTER BELOW INTERPOLATED CR		
3	28.0	10.0	37.0	18.0	2.265	2.189	1.34[illegible]
4	28.0	6.0	41.0	22.0	CENTER BELOW INTERPOLATED CR		
5	28.0	2.0	37.0	26.0	CIRCLE OUTSIDE SLOPE		
6	28.0	10.0	35.0	18.0	2.404	2.312	1.632
7	28.0	12.0	37.0	16.0	2.307	2.249	1.567
8	28.0	10.0	39.0	18.0	2.404	2.312	1.632
9	28.0	8.0	37.0	20.0	CENTER BELOW INTERPOLATED CR		
10	28.0	12.0	35.0	16.0	2.410	2.341	1.631
11	28.0	12.0	39.0	16.0	2.410	2.341	1.631
12	28.0	8.0	39.0	20.0	CENTER BELOW INTERPOLATED CR		
13	28.0	8.0	35.0	20.0	CENTER BELOW INTERPOLATED CR		

F.S. MINIMUM= 2.265 FOR THE CIRCLE OF CENTER (37.0, 18.0)

BISHOP MODIFIED AND/OR ORDINARY METHOD OF SLICES

permafrost depth 7 feet, 10 feet from centerline

NUMBER	TANGENT	RADIUS	(X) CENTER	(Y) CENTER	FS(BISHOP)	FS(OMS)	dFS(BS)
1	30.0	10.0	35.0	20.0	CENTER BELOW INTERPOLATED CR		
2	30.0	10.0	31.0	20.0	CENTER BELOW INTERPOLATED CR		
3	30.0	14.0	35.0	16.0	1.731	1.680	1.063
4	30.0	10.0	39.0	20.0	CENTER BELOW INTERPOLATED CR		
5	30.0	6.0	35.0	24.0	CENTER BELOW INTERPOLATED CR		
6	30.0	14.0	33.0	16.0	1.895	1.826	1.156
7	30.0	16.0	35.0	14.0	1.779	1.739	1.097
8	30.0	14.0	37.0	16.0	1.682	1.636	1.035
9	30.0	12.0	35.0	18.0	1.672	1.610	1.010
10	30.0	12.0	33.0	18.0	1.884	1.797	1.127
11	30.0	12.0	37.0	18.0	1.612	1.556	.976
12	30.0	10.0	35.0	20.0	CENTER BELOW INTERPOLATED CR		
13	30.0	14.0	37.0	16.0	1.682	1.636	1.035
14	30.0	12.0	39.0	18.0	1.672	1.610	1.010
15	30.0	10.0	37.0	20.0	CENTER BELOW INTERPOLATED CR		
16	30.0	14.0	35.0	16.0	1.731	1.680	1.063
17	30.0	14.0	39.0	16.0	1.731	1.680	1.063
18	30.0	10.0	39.0	20.0	CENTER BELOW INTERPOLATED CR		
19	30.0	10.0	35.0	20.0	CENTER BELOW INTERPOLATED CR		

F.S. MINIMUM= 1.612 FOR THE CIRCLE OF CENTER (37.0, 18.0)

BISHOP MODIFIED AND/OR ORDINARY METHOD OF SLICES

permafrost depth 7 feet, 10 feet from centerline

NUMBER	TANGENT	RADIUS	(X) CENTER	(Y) CENTER	FS(BISHOP)	FS(OMS)	dFS(BS.
1	35.0	13.0	35.0	20.0	CENTER BELOW INTERPOLATED CR		
2	35.0	15.0	31.0	20.0	CENTER BELOW INTERPOLATED CR		
3	35.0	17.0	35.0	16.0	1.105	1.071	.50[illegible]
4	35.0	15.0	39.0	20.0	CENTER BELOW INTERPOLATED CR		
5	35.0	11.0	35.0	24.0	CENTER BELOW INTERPOLATED CR		
6	35.0	19.0	33.0	16.0	1.157	1.1[illegible]	.527

7	35.0	21.0	35.0	14.0	1.149	1.118	.546
8	35.0	19.0	37.0	16.0	1.092	1.057	.499
9	35.0	17.0	35.0	18.0	1.052	1.015	.447
10	35.0	17.0	33.0	18.0	1.106	1.064	.46[illegible]
11	35.0	17.0	37.0	18.0	1.035	.999	.44
12	35.0	15.0	33.0	20.0	CENTER	BELOW	INTERPOLATED CF
13	35.0	19.0	37.0	16.0	1.092	1.057	.49[illegible]
14	35.0	17.0	39.0	18.0	1.052	1.015	.4[illegible]
15	35.0	15.0	37.0	20.0	CENTER	BELOW	INTERPOLATED CF
16	35.0	19.0	35.0	16.0	1.106	1.071	.50[illegible]
17	35.0	19.0	39.0	16.0	1.106	1.071	.505
18	35.0	15.0	39.0	20.0	CENTER	BELOW	INTERPOLATED CP
19	35.0	15.0	35.0	20.0	CENTER	BELOW	INTERPOLATED CF

F.S. MINIMUM= 1.035 FOR THE CIRCLE OF CENTER (37.0, 18.0)

Program STABR -- Version 2.84 (MS-DOS)

BISHOP MODIFIED AND/OR ORDINARY METHOD OF SLICES

permafrost depth 7 feet, 10 feet from centerline

CONTROL DATA

NUMBER OF SPECIFIED CENTERS	0
NUMBER OF DEPTH LIMITING TANGENTS	3
NUMBER OF VERTICAL SECTIONS	12
NUMBER OF SOIL LAYER BOUNDARIES	5
NUMBER OF PORE PRESSURE LINES	0
NUMBER OF POINTS DEFINING COHESION PROFILE	0

SEISMIC COEFFICIENT S1,S2 = .00, .00

UNIT WEIGHT OF WATER = 62.40

SEARCH IS BASED ON BISHOP MODIFIED METHOD

SEARCH STARTS AT CENTER (37.0, 22.0) WITH FINAL GRID OF 2.0

ALL CIRCLES TANGENT TO DEPTH, 28.0, 30.0, 35.0,

GEOMETRY

SECTIONS	.0	10.0	13.0	15.0	20.0	32.0	42.0	64.0	69.0	71.0	74.0
T. CRACKS	18.0	18.0	18.0	18.0	18.0	18.0	25.0	25.0	25.0	25.0	25.0
W IN CRACK	18.0	18.0	18.0	18.0	18.0	18.0	25.0	25.0	25.0	25.0	25.0
BOUNDARY 1	18.0	18.0	18.0	18.0	18.0	18.0	25.0	25.0	25.0	25.0	25.0
BOUNDARY 2	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0
BOUNDARY 3	35.0	35.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	35.0
BOUNDARY 4	35.0	35.0	28.0	30.0	35.0	35.0	35.0	35.0	30.0	28.0	35.0
BOUNDARY 5	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0

REINFORCING FORCE DATA AT 3 LEVEL(s)

Y= 20.00 NO. OF FORCE POINTS= 4

X	FORCE
34.8	.0
31.0	1666.0
3.0	1666.0
.0	.0

Y= 22.00 NO. OF FORCE POINTS= 4

X	FORCE
37.7	.0
34.0	5000.0
3.0	5000.0
.0	.0

Y= 25.00 NO. OF FORCE POINTS= 4

X	FORCE
42.0	.0
39.0	5000.0
3.0	5000.0
.0	.0

SOIL PROPERTIES

LAYER	COHESION	FRICTION ANGLE	DENSITY
1	.0	35.0	135.0
2	1000.0	40.0	120.0
3	100.0	.0	105.0
4	1000.0	40.0	120.0

BISHOP MODIFIED AND/OR ORDINARY METHOD OF SLICES

permafrost depth 7 feet, 10 feet from centerline

NUMBER	TANGENT	RADIUS	(X) CENTER	(Y) CENTER	FS(BISHOP)	FS(OMS)	dFS(BS)
1	28.0	6.0	37.0	22.0	CENTER BELOW INTERPOLATED CR		
2	28.0	6.0	33.0	22.0	CENTER BELOW INTERPOLATED CR		
3	28.0	10.0	37.0	18.0	2.358	2.283	1.639
4	28.0	6.0	41.0	22.0	CENTER BELOW INTERPOLATED CR		
5	28.0	2.0	37.0	26.0	CIRCLE OUTSIDE SLOPE		
6	28.0	10.0	35.0	18.0	2.503	2.411	1.731
7	28.0	12.0	37.0	16.0	2.446	2.388	1.706
8	28.0	10.0	39.0	18.0	2.503	2.411	1.731
9	28.0	8.0	37.0	20.0	CENTER BELOW INTERPOLATED CR		
10	28.0	12.0	35.0	16.0	2.555	2.486	1.776
11	28.0	12.0	39.0	16.0	2.555	2.486	1.776
12	28.0	8.0	39.0	20.0	CENTER BELOW INTERPOLATED CR		
13	28.0	8.0	35.0	20.0	CENTER BELOW INTERPOLATED CR		

F.S. MINIMUM= 2.358 FOR TH CIRCLE OF CENTER (37.0, 18.0)

BISHOP MODIFIED AND/OR ORDINARY METHOD OF SLICES

permafrost depth 7 feet, 10 feet from centerline

NUMBER	TANGENT	RADIUS	(X) CENTER	(Y) CENTER	FS(BISHOP)	FS(OMS)	dFS(BS)
1	30.0	10.0	35.0	20.0	CENTER BELOW INTERPOLATED CR		
2	30.0	10.0	31.0	20.0	CENTER BELOW INTERPOLATED CR		
3	30.0	14.0	35.0	16.0	1.826	1.774	1.158
4	30.0	10.0	39.0	20.0	CENTER BELOW INTERPOLATED CR		
5	30.0	6.0	35.0	24.0	CENTER BELOW INTERPOLATED CR		
6	30.0	14.0	33.0	16.0	1.998	1.929	1.259
7	30.0	16.0	35.0	14.0	1.895	1.854	1.212
8	30.0	14.0	37.0	16.0	1.774	1.728	1.127
9	30.0	12.0	35.0	18.0	1.734	1.671	1.071
10	30.0	12.0	33.0	19.0	1.752	1.865	1.195
11	30.0	12.0	37.0	18.0	1.671	1.615	[illegible]
12	30.0	10.0	35.0	20.0	CENTER BELOW INTERPOLATED CR		
13	30.0	14.0	37.0	16.0	1.774	1.728	1.127
14	30.0	12.0	39.0	18.0	1.734	1.671	1.071
15	30.0	10.0	37.0	20.0	CENTER BELOW INTERPOLATED CR		
16	30.0	14.0	35.0	16.0	1.826	1.774	1.159
17	30.0	14.0	39.0	16.0	[illegible]	1.774	1.158
18	30.0	10.0	39.0	20.0	CENTER BELOW INTERPOLATED CR		
19	30.0	10.0	35.0	20.0	CENTER BELOW INTERPOLATED CR		

F.S. MINIMUM= 1.671 FOR THE CIRCLE OF CENTER (37.0, 18.0)

BISHOP MODIFIED AND/OR ORDINARY METHOD OF SLICES

permafrost depth feet, 10 feet from centerline

NUMBER	TANGENT	RADIUS	(X) CENTER	(Y) CENTER	FS(BISHOP)	FS(OMS)	dFS(BS)
1	35.0	15.0	35.0	20.0	CENTER BELOW INTERPOLATED CF		
2	35.0	15.0	31.0	20.0	CENTER BELOW INTERPOLATED CF		
3	35.0	19.0	35.0	16.0	1.151	1.116	.551
4	35.0	15.0	39.0	20.0	CENTER BELOW INTERPOLATED CF		
5	35.0	11.0	35.0	24.0	CENTER BELOW INTERPOLATED CF		
6	35.0	19.0	33.0	16.0	1.200	1.160	.572
7	35.0	21.0	35.0	14.0	1.207	1.175	.604
8	35.0	19.0	37.0	16.0	1.136	1.102	.543
9	35.0	17.0	35.0	18.0	1.079	1.042	.473
10	35.0	17.0	33.0	18.0	1.134	1.092	.497
11	35.0	17.0	37.0	18.0	1.062	1.026	.467
12	35.0	15.0	35.0	20.0	CENTER BELOW INTERPOLATED CR.		
13	35.0	19.0	37.0	16.0	1.136	1.102	.543
14	35.0	17.0	39.0	18.0	1.079	1.042	.475
15	35.0	15.0	37.0	20.0	CENTER BELOW INTERPOLATED CR		
16	35.0	19.0	35.0	16.0	1.151	1.116	.550
17	35.0	19.0	39.0	16.0	1.151	1.116	.550
18	35.0	15.0	39.0	20.0	CENTER BELOW INTERPOLATED CR		
19	35.0	15.0	35.0	20.0	CENTER BELOW INTERPOLATED CR		

F.S. MINIMUM= 1.062 FOR THE CIRCLE OF CENTER (37.0, 18.0)

Program STABR -- Version 2.84 (MS-DOS)

BISHOP MODIFIED AND/OR ORDINARY METHOD OF SLICES

permafrost depth 7 feet, 10 feet from centerline

CONTROL DATA

NUMBER OF SPECIFIED CENTERS	0
NUMBER OF DEPTH LIMITING TANGENTS	0
NUMBER OF VERTICAL SECTIONS	12
NUMBER OF SOIL LAYER BOUNDARIES	5
NUMBER OF PORE PRESSURE LINES	0
NUMBER OF POINTS DEFINING COHESION PROFILE	0

SEISMIC COEFFICIENT S1,S2 = .00, .00

UNIT WEIGHT OF WATER = 62.40

SEARCH IS BASED ON BISHOP MODIFIED METHOD

SEARCH STARTS AT CENTER (37.0, 22.0) WITH FINAL GRID OF 2.0

ALL CIRCLES PASS THROUGH THE POINT (42.0, 35.0)

GEOMETRY

SECTIONS	.0	10.0	13.0	15.0	20.0	32.0	42.0	64.0	69.0	71.0	74.0
T. CRACKS	18.0	18.0	18.0	18.0	18.0	18.0	25.0	25.0	25.0	25.0	25.0
W IN CRACK	18.0	18.0	18.0	18.0	18.0	18.0	25.0	25.0	25.0	25.0	25.0
BOUNDARY 1	18.0	18.0	18.0	18.0	18.0	18.0	25.0	25.0	25.0	25.0	25.0
BOUNDARY 2	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0
BOUNDARY 3	35.0	35.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	35.0	35.0
BOUNDARY 4	35.0	35.0	28.0	30.0	35.0	35.0	35.0	35.0	30.0	28.0	35.0
BOUNDARY 5	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0

REINFORCING FORCE DATA AT 0 LEVEL(s)

SOIL PROPERTIES

LAYER	COHESION	FRICTION ANGLE	DENSITY
1	.0	35.0	135.0
2	1000.0	40.0	120.0
3	100.0	.0	105.0
4	1000.0	40.0	120.0

BISHOP MODIFIED AND/OR ORDINARY METHOD OF SLICES

permafrost depth 7 feet, 10 feet from centerline

NUMBER	TANGENT	RADIUS	(X) CENTER	(Y) CENTER	FS(BISHOP)	FS(OMS)	dFS(BS
1	35.9	13.9	37.0	22.0	CENTER BELOW	INTERPOLATED CR.	
2	[illegible]	15.8	37.0	22.0	CENTER BELOW	INTERPOLATED CR	
3	33.[illegible]	17.7	37.0	17.0	.457	.731	.000
4	35.0	[illegible]	41.0	22.0	CENTER BELOW	INTERPOLATED CR	
5	36.3	10.7	37.0	26.0	CENTER BELOW	RIGHT	INTERSECT
6	36.4	18.[illegible]	35.0	18.[illegible]	.[illegible]05	.787	.000
7	35.6	19.[illegible]	37.0	16.0	.[illegible]	.[illegible]40	.000
8	33.3	17.3	39.0	18.0	.[illegible]19	.489	.000

9	35.8	15.8	37.0	20.0	CENTER	BELOW	INTERPOLATED CF
10	37.2	19.2	33.0	18.0	.373	.358	.000
11	36.2	20.2	35.0	16.0	.411	.395	.000
12	36.6	16.6	35.0	20.0	CENTER	BELOW	INTERPOLATED CF
13	38.2	20.2	31.0	18.0	2.397	2.238	.000
14	37.0	21.0	33.0	16.0	.378	.365	.000
15	37.5	17.5	33.0	20.0	CENTER	BELOW	INTERPOLATED CF
16	38.0	22.0	31.0	16.0	2.841	2.572	.000
17	36.2	20.2	35.0	16.0	.411	.395	.000
18	36.6	16.6	35.0	20.0	CENTER	BELOW	INTERPOLATED CF
19	38.6	18.6	31.0	20.0	CENTER	BELOW	INTERPOLATED CF

F.S. MINIMUM= .373 FOR THE CIRCLE OF CENTER (33.0, 18.0)

Program STABR -- Version 2.84 (MS-DOS)

BISHOP MODIFIED AND/OR ORDINARY METHOD OF SLICES

permafrost depth 7 feet, 10 feet from centerline

CONTROL DATA

NUMBER OF SPECIFIED CENTERS	0
NUMBER OF DEPTH LIMITING TANGENTS	0
NUMBER OF VERTICAL SECTIONS	12
NUMBER OF SOIL LAYER BOUNDARIES	5
NUMBER OF PORE PRESSURE LINES	0
NUMBER OF POINTS DEFINING COHESION PROFILE	0

SEISMIC COEFFICIENT S1,S2 = .00, .00

UNIT WEIGHT OF WATER = 62.40

SEARCH IS BASED ON BISHOP MODIFIED METHOD

SEARCH STARTS AT CENTER (37.0, 22.0) WITH FINAL GRID OF 2.0

ALL CIRCLES PASS THROUGH THE POINT (42.0, 35.0)

GEOMETRY

SECTIONS	.0	10.0	13.0	15.0	20.0	32.0	42.0	64.0	69.0	71.0	74.0
T. CRACKS	18.0	18.0	18.0	18.0	18.0	18.0	25.0	25.0	25.0	25.0	25.0
W IN CRACK	18.0	18.0	18.0	18.0	18.0	18.0	25.0	25.0	25.0	25.0	25.0
BOUNDARY 1	18.0	18.0	18.0	18.0	18.0	18.0	25.0	25.0	25.0	25.0	25.0
BOUNDARY 2	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0
BOUNDARY 3	35.0	35.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	35.0
BOUNDARY 4	35.0	35.0	28.0	30.0	35.0	35.0	35.0	35.0	30.0	28.0	35.0
BOUNDARY 5	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0

REINFORCING FORCE DATA AT 1 LEVEL(s)

Y= 25.00 NO. OF FORCE POINTS= 4

X	FORCE
42.0	.0
39.0	5000.0
3.0	5000.0
.0	.0

SOIL PROPERTIES

LAYER	COHESION	FRICTION ANGLE	DENSITY
1	.0	35.0	125.0
2	1000.0	40.0	120.0
3	100.0	.0	105.0
4	1000.0	40.0	120.0

BISHOP MODIFIED AND/OR ORDINARY METHOD OF SLICES

permafrost depth 7 feet, 10 feet from centerline

NUMBER TANGENT RADIUS X CENTER Y CENTER FS(BISHOP) FS(OMS) [illegible]

1	35.9	13.9	37.0	22.0	CENTER BELOW INTERPOLATED CF		
2	37.8	15.8	33.0	22.0	CENTER BELOW INTERPOLATED CF		
3	35.7	17.7	37.0	18.0	.714	.691	.260
4	35.0	13.0	41.0	22.0	CENTER BELOW INTERPOLATED CR		
5	36.3	10.3	37.0	26.0	CENTER BELOW RIGHT INTERSECT		
6	36.4	18.4	35.0	18.0	.444	.627	.240
7	35.6	19.6	37.0	16.0	.743	.722	.283
8	35.3	17.3	39.0	[illegible]	.795	.769	.283
9	35.8	15.8	37.0	20.0	CENTER BELOW INTERPOLATED CF		
10	37.2	19.2	33.0	15.0	.598	.593	.225
11	36.2	20.2	35.0	16.0	.673	.658	.262
12	36.6	16.6	33.0	20.0	CENTER BELOW INTERPOLATED CF.		
13	38.2	20.2	31.0	18.0	2.609	2.449	.211
14	37.0	21.0	33.0	16.0	.627	.614	.249
15	37.5	17.5	33.0	20.0	CENTER BELOW INTERPOLATED CR		
16	38.0	22.0	31.0	16.0	3.075	2.806	.234
17	36.2	20.2	35.0	16.0	.673	.658	.262
18	36.6	16.6	35.0	20.0	CENTER BELOW INTERPOLATED CR		
19	38.6	18.6	31.0	20.0	CENTER BELOW INTERPOLATED CR.		

F.S. MINIMUM= .598 FOR THE CIRCLE OF CENTER (33.0, 15.0)

Program STABR -- Version 2.34 (MS-DOS)

BISHOP MODIFIED AND/OR ORDINARY METHOD OF SLICES

permafrost depth 7 feet, 10 feet from centerline

CONTROL DATA

NUMBER OF SPECIFIED CENTERS	0
NUMBER OF DEPTH LIMITING TANGENTS	0
NUMBER OF VERTICAL SECTIONS	12
NUMBER OF SOIL LAYER BOUNDARIES	5
NUMBER OF PORE PRESSURE LINES	0
NUMBER OF POINTS DEFINING COHESION PROFILE	0

SEISMIC COEFFICIENT S1,S2 = .00, .00

UNIT WEIGHT OF WATER = 62.40

SEARCH IS BASED ON BISHOP MODIFIED METHOD

SEARCH STARTS AT CENTER (37.0, 22.0) WITH FINAL GRID OF 2.0

ALL CIRCLES PASS THROUGH THE POINT (42.0, 35.0)

GEOMETRY

SECTIONS	.0	10.0	13.0	15.0	20.0	32.0	42.0	64.0	69.0	71.0	74.0
T. CRACKS	18.0	18.0	18.0	18.0	18.0	18.0	25.0	25.0	25.0	25.0	25.0
W IN CRACK	18.0	18.0	18.0	18.0	18.0	18.0	25.0	25.0	25.0	25.0	25.0
BOUNDARY 1	18.0	18.0	18.0	18.0	18.0	18.0	25.0	25.0	25.0	25.0	25.0
BOUNDARY 2	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0
BOUNDARY 3	35.0	35.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	35.0
BOUNDARY 4	35.0	35.0	28.0	30.0	35.0	35.0	35.0	35.0	30.0	28.0	33.0
BOUNDARY 5	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0

REINFORCING FORCE DATA AT 2 LEVEL(s)

Y= 22.00 NO. OF FORCE POINTS= 4

X	FORCE
37.7	.0
34.0	5000.0
3.0	5000.0
.0	.0

Y= 25.00 NO OF FORCE POINTS= 4

X	FORCE
42.0	.0
39.0	5000.0
3.0	5000.0
.0	.0

SOIL PROPERTIES

LAYER	COHESION	FRICTION ANGLE	DENSITY
1	.0	35.0	135.0
2	1000.0	40.0	120.0
3	100.0	.0	105.0

4	1000.0	40.0	120.0

BISHOP MODIFIED AND/OR ORDINARY METHOD OF SLICES

permafrost depth 7 feet, 10 feet from centerline

NUMBER	TANGENT	RADIUS	(X) CENTER	(Y) CENTER	FS(BISHOP)	FS(OMS)	dFS(BS
1	35.9	13.9	37.0	22.0	CENTER BELOW INTERPOLATED CR		
2	37.9	15.9	33.0	22.0	CENTER BELOW INTERPOLATED CR		
3	35.7	17.7	37.0	18.0	.863	.840	.40[illegible]
4	35.0	13.0	41.0	22.0	CENTER BELOW INTERPOLATED CR		
5	36.3	10.3	37.0	26.0	CENTER BELOW RIGHT INTERSECT		
6	36.4	18.4	35.0	18.0	.781	.764	.377
7	35.6	19.6	37.0	16.0	.932	.911	.471
8	35.3	17.3	39.0	18.0	.959	.929	.440
9	35.8	15.8	37.0	20.0	CENTER BELOW INTERPOLATED CR.		
10	37.2	19.2	33.0	18.0	.726	.711	.354
11	36.2	20.2	35.0	16.0	.848	.832	.[illegible]37
12	36.6	16.6	35.0	20.0	CENTER BELOW INTERPOLATED CR		
13	38.2	20.2	31.0	18.0	2.729	2.570	.332
14	37.0	21.0	33.0	16.0	.793	.780	.414
15	37.5	17.5	33.0	20.0	CENTER BELOW INTERPOLATED CR		
16	38.0	22.0	31.0	16.0	3.231	2.962	.390
17	36.2	20.2	35.0	16.0	.848	.832	.437
18	36.6	16.6	35.0	20.0	CENTER BELOW INTERPOLATED CR		
19	38.6	18.6	31.0	20.0	CENTER BELOW INTERPOLATED CR		

F.S. MINIMUM= .726 FOR THE CIRCLE OF CENTER (33.0, 18.0)

Program STABR -- Version 2.84 (MS-DOS)

BISHOP MODIFIED AND/OR ORDINARY METHOD OF SLICES

permafrost depth 7 feet, 10 feet from centerline

CONTROL DATA

NUMBER OF SPECIFIED CENTERS	0
NUMBER OF DEPTH LIMITING TANGENTS	0
NUMBER OF VERTICAL SECTIONS	12
NUMBER OF SOIL LAYER BOUNDARIES	5
NUMBER OF PORE PRESSURE LINES	0
NUMBER OF POINTS DEFINING COHESION PROFILE	0

SEISMIC COEFFICIENT S1,S2 = .00, .00

UNIT WEIGHT OF WATER = 62.40

SEARCH IS BASED ON BISHOP MODIFIED METHOD

SEARCH STARTS AT CENTER (37.0, 22.0) WITH FINAL GRID OF 2.0

ALL CIRCLES PASS THROUGH THE POINT (42.0, 35.0)

GEOMETRY

SECTIONS	.0	10.0	13.0	15.0	20.0	32.0	42.0	64.0	69.0	71.0	74.0
T. CRACKS	18.0	18.0	18.0	18.0	18.0	18.0	25.0	25.0	25.0	25.0	25.0
W IN CRACK	18.0	18.0	18.0	18.0	18.0	18.0	25.0	25.0	25.0	25.0	25.0
BOUNDARY 1	18.0	18.0	18.0	18.0	18.0	18.0	25.0	25.0	25.0	25.0	25.0
BOUNDARY 2	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0
BOUNDARY 3	35.0	35.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	35.0
BOUNDARY 4	35.0	35.0	28.0	30.0	35.0	35.0	35.0	35.0	30.0	28.0	35.0
BOUNDARY 5	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0

REINFORCING FORCE DATA AT 3 LEVEL(s)

Y= 20.00 NO. OF FORCE POINTS= 4

Y	FORCE
34.8	.0
31.0	1666.0
3.0	1666.0
.0	.0

Y= 22.00 NO. OF FORCE POINTS= 4

Y	FORCE
37.7	.0
34.0	5000.0
3.0	5000.0
.0	.0

Y= 25.00 NO. OF FORCE POINTS= 4

Y	FORCE
42.0	.0
39.0	5000.0
3.0	5000.0
.0	.0

SOIL PROPERTIES

LAYER	COHESION	FRICTION ANGLE	DENSITY
1	.0	35.0	135.0
2	1000.0	40.0	120.0
3	100.0	.0	105.0
4	1000.0	40.0	120.0

BISHOP MODIFIED AND/OR ORDINARY METHOD OF SLICES

permafrost depth 7 feet, 10 feet from centerline

NUMBER	TANGENT	RADIUS	(X) CENTER	(Y) CENTER	FS(BISHOP)	FS(OMS)	dFS(BS)
1	35.9	13.9	37.0	22.0	CENTER BELOW INTERPOLATED CR		
2	37.8	15.8	33.0	22.0	CENTER BELOW INTERPOLATED CR		
3	35.7	17.7	37.0	18.0	.887	.865	.434
4	35.0	13.0	41.0	22.0	CENTER BELOW INTERPOLATED CR		
5	36.3	10.3	37.0	26.0	CENTER BELOW RIGHT INTERSECT		
6	36.4	18.4	35.0	18.0	.804	.786	.399
7	35.6	19.6	37.0	16.0	.974	.953	.513
8	35.3	17.3	39.0	18.0	.986	.956	.467
9	35.8	15.8	37.0	20.0	CENTER BELOW INTERPOLATED CR		
10	37.2	19.2	33.0	18.0	.748	.733	.375
11	36.2	20.2	35.0	16.0	.887	.871	.476
12	36.6	16.6	35.0	20.0	CENTER BELOW INTERPOLATED CR		
13	38.2	20.2	31.0	18.0	2.749	2.590	.352
14	37.0	21.0	33.0	16.0	.829	.816	.451
15	37.5	17.5	33.0	20.0	CENTER BELOW INTERPOLATED CR		
16	38.0	22.0	31.0	16.0	3.266	2.997	.425
17	36.2	20.2	35.0	16.0	.887	.871	.476
18	36.6	16.6	35.0	20.0	CENTER BELOW INTERPOLATED CR		
19	38.6	18.6	31.0	20.0	CENTER BELOW INTERPOLATED CR		

F.S. MINIMUM= .748 FOR THE CIRCLE OF CENTER (33.0, 18.0)

APPENDIX C

PROCUREMENT OF SSTIPN PROGRAM

The procurement of computer software at Georgia Tech must follow Electronic Data Processing Equipment Request Procedures (EDP) under an executive order from the Governor. The procurement of SSTIPN is summarized as follows:

1. EPD request number 11-EC-86 was submitted for approval (enclosed).
2. Approval letter for EDP request number 11-EC-86 (enclosed).
3. Georgia Institute of Technology requisition form for SSTIPN (enclosed).
4. Letter of request for purchase of SSTIPN to Professor Duncan (enclosed).
5. Acceptance letter Professor Duncan (enclosed.

[illegible]

[illegible] NUMBER: 11-EC-86

[illegible]: Georgia Institute of Technology
College of Engineering
Department of Civil Engineering

MAILING ADDRESS: Atlanta, GA 30332

LOCATION OF EQUIPMENT: Geotechnical Building

PERSON RESPONSIBLE: Neil D. Williams, Ph.D.

TELEPHONE: 404/894-2221

TYPE OF REQUEST: ______ New System __X__ [illegible]

EQUIPMENT REQUESTED:
Software: Soil Structure Interactive [illegible] ([illegible]STIPN)

COST OF EQUIPMENT

The anticipated cost for the software [illegible] of funds for this acquisition will be [illegible] provided by [illegible], Inc.

WORK TO BE PERFORMED AND WORKLOAD:

The [illegible] program will be used to analyze [illegible] [illegible] road embankment constructed on [illegible] Fairbanks, Alaska. The analysis will yield design [illegible] in the geotextile material which will [illegible] [illegible].

The program will be utilized by one graduate student [illegible] approximately 20 hours per week. [illegible] program to other problems will [illegible].

ALTERNATIVES CONSIDERED:

The other alternative considered [illegible] program to produce the same results [illegible] [illegible].

[illegible] ALTERNATIVES:

[illegible] [illegible] [illegible] [illegible] [illegible] [illegible]

BOARD OF REGENTS OF THE UNIVERSITY SYSTEM OF GEORGIA
PRESIDENT'S OFFICE BUILDING
ATHENS, GEORGIA 30602

OFFICE OF ASSISTANT VICE CHANCELLOR
FOR COMPUTING SYSTEMS

January 31, 1986

Dr. Joseph M. Pettit
President
Georgia Institute of Technology
225 North Avenue, N.W.
Atlanta, GA 30332

Dear President Pettit:

Approval is given to Georgia Institute of Technology to acquire the data processing equipment referenced in request number(s):

[redacted] 12-AT-86

Yours very truly,

James L. Carmon
James L. Carmon
Assistant Vice Chancellor
for Computing Systems

JLC/jw

cc: Mr. John Gehl

GEORGIA INSTITUTE OF TECHNOLOGY

SCHOOL OF CIVIL ENGINEERING

DATE 1/22/86

SUPPLIES

Signature of person requesting [signature]

Signature of faculty member supervising [signature]

Signature of cognizant staff that these items are not in stock [signature]

Estimated Cost 200.00

On Campus ______ Off Campus ______ State Funds ______ Project Funds ✓

Vendor Virginia Tech Foundation

Items Computer Program SSTIPN (on tape), source listing, and user manuals

E20-693

Requisition Number 200-6-25147

Approved [signature]

J. E. Fitzgerald, Director
School of Civil Engineering

Professor J.M. Duncan
Department of Civil Engineering
104 Patton Hall
Virginia Tech [illegible]
Blacksburg, VA 24061

Dear Professor Duncan,

The finite element analysis program, Soil Structure Interaction Program Non-linear (SSTIPN) we discussed in our phone conversation on January 17 will be very useful for our analysis of a geotextile reinforced road embankment. I am requesting that you send a copy of SSTIPN with source listing and user manuals to the following address:

Neil D. Williams, Ph.D.
c/o George Papaioannou
Georgia Institute of Technology
Department of Civil Engineering
Atlanta, GA 30332

It is my understanding from our phone conversation that the cost of the above items will be $200.00. The requisition number applicable to this purchase is #200-6-20147.

The following tape format information is provided for [illegible] transfer of the program:

- 80 character records
- 10 records per block
- 9 tracks
- Coded in ASCII or EBCDIC
- Density - 1600 or 6250 BPI

In addition, please specify the program tape format of [illegible] you send.

If further information is required please contact [illegible] Williams or me at (404)894-[illegible].

Thank you for your effort and [illegible].

Sincerely,

George Papaioannou

COLLEGE OF ENGINEERING

VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY

Blacksburg, Virginia 24061

DEPARTMENT OF CIVIL ENGINEERING (703) 961-6635

February 13, 1986

INVOICE

Mr. George Papaioanou
c/o Dr. Neil D. Williams
Georgia Institute of Technology
Department of Civil Engineering
Atlanta, GA 30332

REF: Requisition No. 200-6-25147

For computer program SSTIPN (Soil-Structure Interaction Program) sent via BITNET on February 13, 1986.

SSTIPN	$200.00

Payable upon receipt.

Mail payment to:

Professor J. M. Duncan
Department of Civil Engineering
104 Patton Hall
Virginia Tech
Blacksburg, VA 24061

Please make check payable to: The Virginia Tech Foundation, Inc.

APPENDIX D

BASIC PLOTTING PROGRAM

The BASIC program for plotting FEADAM84 and SSTIPN reduced output was written by Robert L. Roglin (21). The program was written for use on an IBM PC with enhanced computer graphics. Output data from FEADAM84 and SSTIPN was reduced for use in the plotting program. Four data files were reduced from the output: Nodal point input data, four node solid element data, Nodal point displacement data, and four node element stress data. Three dimensional plots of stresses were not useful in evaluating stress distributions within the embankment and are not included. Program source listing is enclosed.

```
10 REM      PROGRAM:  GRAPH1
20 REM
30 REM          USER:   R.L. ROBLIN  RESEARCH ENG II GTRI
40 REM                  GEORGE PAPAIOANOU  SPECIAL PROBLEM
50 REM    ABSTRACT:  THIS PROGRAM IS USED TO PLOT A TWO DIMENSIONAL FINITE
60 REM                 ELEMENT GRID IN THE UNDEFORMED AND DEFORMED STATES
70 REM
80 REM ------------------------------------------------------------------------
90 DIM JT(70),X(70),Y(70),DX(3,70),DY(3,70)
100 DIM EL(50),I1(50),I2(50),I3(50),I4(50),EX(50),EY(50)
110 DIM SXX(3,50),SYY(3,50),SXY(3,50),XS(50),YS(50)
120 DIM ELS(10),ELF(10)
130 REM
140 REM
150 REM  Open Files For Input "JOINTS" "ELEMENTS" "DISPL" "STRESSES"
160 REM
170 REM ------------------------------------------------------------------------
180 REM
190 OPEN "JOINTS.DAT" FOR INPUT AS #1
200 INPUT #1, NJT
210 FOR I = 1 TO NJT
220  INPUT #1,JT(I),X(JT(I)),Y(JT(I))
230 NEXT I
240 CLOSE #1
250 OPEN "ELEMENTS.DAT" FOR INPUT AS #1
260 INPUT #1, NEL
270 FOR I = 1 TO NEL
280  INPUT #1,EL(I),I1(EL(I)),I2(EL(I)),I3(EL(I)),I4(EL(I)),EX(EL(I)),EY(EL(I))
290 NEXT I
300 INPUT #1,NLR
310 FOR I = 1 TO NLR
320  INPUT #1,LAY,ELS(LAY),ELF(LAY)
330 NEXT I
340 CLOSE #1
350 OPEN "DISPL.DAT" FOR INPUT AS #1
360 INPUT #1, NLC
370 FOR J = 1 TO NLC
380  FOR I = 1 TO NJT
390   INPUT #1, JT(I),DX(J,JT(I)),DY(J,JT(I))
400  NEXT I
410 NEXT J
420 CLOSE #1
430 OPEN "STRESSES.DAT" FOR INPUT AS #1
440 FOR J = 1 TO NLC
450  FOR I = 1 TO NEL
460   INPUT #1,EL(I),SXX(J,EL(I)),SYY(J,EL(I)),SXY(J,EL(I))
470  NEXT I
480 NEXT J
490 CLOSE #1
500 REM
510 REM
520 REM      Displaced Shape Plotting
530 REM
540 REM ------------------------------------------------------------------------
550 REM
560 INPUT "HORIZONTAL SCALE FACTOR: ";XSCALE
570 INPUT "VERTICAL SCALE FACTOR: ";YSCALE
580 INPUT "HORIZONTAL DISPLACEMENT SCALE FACTOR: ";DXSCALE
590 INPUT "VERTICAL DISPLACEMENT SCALE FACTOR: ";DYSCALE
600 INPUT "LOAD CASE NUMBER: ";LC
610 SCREEN 1,0
620 COLOR ,0
630 WINDOW (-110,-70)-(500,150)
640 REM
650 REM
```

```
670 REM
680 REM -----------------------------------------------------------------------------
690 REM
700 LINE (0,0) - (400,0): LINE (0,0) - (0,100)
710 REM
720 REM
730 REM   Plot Undeformed Geometry
740 REM
750 REM -----------------------------------------------------------------------------
760 REM
770 FOR I = 1 TO NEL
780  X1 = HSCALE*X(I1(EL(I))): Y1 = VSCALE*Y(I1(EL(I)))
790  X2 = HSCALE*X(I2(EL(I))): Y2 = VSCALE*Y(I2(EL(I))): LINE (X1,Y1) - (X2,Y2)
800  X3 = HSCALE*X(I3(EL(I))): Y3 = VSCALE*Y(I3(EL(I))): LINE - (X3,Y3)
810  X4 = HSCALE*X(I4(EL(I))): Y4 = VSCALE*Y(I4(EL(I))): LINE - (X4,Y4)
820  LINE - (X1,Y1)
830 NEXT I
840 REM
850 REM
860 REM  Plot Deformed Geometry
870 REM
880 REM -----------------------------------------------------------------------------
890 REM
900 FOR I = 1 TO NJT
910  X1 = HSCALE*X(I1(EL(I))) + DHSCALE*DX(LC,I1(EL(I)))
920  X2 = HSCALE*X(I2(EL(I))) + DHSCALE*DX(LC,I1(EL(I)))
930  X3 = HSCALE*X(I3(EL(I))) + DHSCALE*DX(LC,I3(EL(I)))
940  X4 = HSCALE*X(I4(EL(I))) + DHSCALE*DX(LC,I4(EL(I)))
950  Y1 = VSCALE*Y(I1(EL(I))) + DVSCALE*DY(LC,I1(EL(I)))
960  Y2 = VSCALE*Y(I2(EL(I))) + DVSCALE*DY(LC,I2(EL(I)))
970  Y3 = VSCALE*Y(I3(EL(I))) + DVSCALE*DY(LC,I3(EL(I)))
980  Y4 = VSCALE*Y(I4(EL(I))) + DVSCALE*DY(LC,I4(EL(I)))
990  LINE (X1,Y1) - (X2,Y2),2
1000  LINE - (X3,Y3),2
1010  LINE - (X4,Y4),2
1020  LINE - (X1,Y1),2
1030 NEXT I
1040 REM
1050 REM
1060 REM   Stress Contour Plotting
1070 REM
1080 REM -----------------------------------------------------------------------------
1090 REM
1100 REM
1110 REM   Develop Coordinate Transformation Equations
1120 REM
1130 REM -----------------------------------------------------------------------------
1140 REM
1150 INPUT "SPIN ANGLE, TIP ANGLE: ";SPIN,TIP
1160 CSPIN = COS(SPIN*3.14159/180): SSPIN = SIN(SPIN*3.14159/180)
1170 CTIP = COS(TIP*3.14159/180): STIP = SIN(TIP*3.14159/180)
1180 PRINT "cspin = ",CSPIN," sspin = ",SSPIN
1190 PRINT "ctip = ",CTIP," stip = ",STIP
1200 INPUT "STRESS, LOAD: ";STRESS,LD
1210 CLS
1220 FOR I = 1 TO NEL
1230  IF STRESS = 1 THEN SIG = SX(LD,EL(I))
1240  IF STRESS = 2 THEN SIG = SY(LD,EL(I))
1250  IF STRESS = 3 THEN SIG = S[illegible](LD,EL(I))
1260  XS(EL(I)) = X(EL(I))*CSPIN + SSPIN*[illegible]
1270  YS(EL(I)) = Y(EL(I))*CTIP + STIP*(X(EL(I))*[illegible])
1280 NEXT I
1290 REM
1300 REM
1310 REM   Plot Stress Contours
```

```
1330 REM ------------------------------------------------------------------------
1340 REM
1350 REM
1360 REM
1370 REM   Plot Global Axis
1380 REM
1390 REM ------------------------------------------------------------------------
1400 REM
1410 XSX = 100*CSPIN: YSX = -100*SSPIN*STIP: LINE (0,0) - (XSX,YSX),1
1420 XSY = 0: YSY = 100*CTIP: LINE (0,0) - (XSY,YSY),2
1430 XSZ = 100*SSPIN: YSZ = 100*CSPIN*STIP: LINE (0,0) - (XSZ,YSZ),3
1440 FOR I = 1 TO NEL
1450 X1 = HSCALE*X(I1(EL(I))): Y1 = VSCALE*Y(I1(EL(I)))
1460 Y1 = Y1*CTIP + X1*STIP*(-1 *SSPIN: X1 = X1*CSPIN
1470 X2 = HSCALE*X(I2(EL(I))): Y2 = VSCALE*Y(I2(EL(I)))
1480 Y2 = Y2*CTIP + X2*STIP*(-1)*SSPIN: X2 = X2*CSPIN: LINE (X1,Y1) - (X2,Y2)
1490 X3 = HSCALE*X(I3(EL(I))): Y3 = VSCALE*Y(I3(EL(I)))
1500 Y3 = Y3*CTIP + X3*STIP*(-1)*SSPIN: X3 = X3*CSPIN: LINE - (X3,Y3)
1510 X4 = HSCALE*X(I4(EL(I))): Y4 = VSCALE*Y(I4(EL(I)))
1520 Y4 = Y4*CTIP + X4*STIP*(-1)*SSPIN: X4 = X4*CSPIN: LINE - (X4,Y4)
1530 LINE - (X1,Y1)
1540 NEXT I
1550 FOR K = 1 TO NLR
1560 K1 = (NLR + 1) - K
1570 J = 0
1580  FOR I = ELS(K1) TO (ELF(K1) - 1)
1590   IB = ELF(K1) - J: IE = ELF(K1) - J - 1
1600   LINE (XS(IB),YS(IB)) - (XS(IE),YS(IE))
1610   IF K1 = 1 THEN GOTO 1640
1620   IE = ELF(K1 - 1) - J
1630   LINE (XS(IB),YS(IB)) - (XS(IE),YS(IE))
1640   J = J + 1
1650  NEXT I
1660  IF K1 = 1 THEN GOTO 1700
1670  IB = ELF(K1) - J: IE = ELF(K1 - 1) - J
1680  LINE (XS(IB),YS(IB)) - (YS(IE),YS(IE))
1690 NEXT K
1700 REM
1710 STOP
```

APPENDIX E

SSTIPN OUTPUT DATA

Detailed results of the SSTIPN analyses are contained herein. Output data includes nodal point displacements, soil element stress and strain data, and internal forces of structural elements. Analyses include output for all five different geotextile strengths. Each of the five geotextile strengths include three different conditions as stated in Section 3.2.

```
SSTIPN: 1 LAYER OF GEOTEXTILE, P=1000 PPI, T=0

TOTAL NUMBER OF NODES------------------- 95
NUMBER OF BAR ELEMENTS------------------  5
NUMBER OF DIFF. BAR MATERIALS-----------  1
NUMBER OF BEAM ELEMENTS-----------------  0
NUMBER OF DIFF. BEAM MATERIALS----------  0
NUMBER OF NODAL LINKS ------------------  0
NUMBER OF INTERFACE ELEMENTS------------  0
NO  OF INTERFACE ELE. IN PREEXIST  PART  0
NUMBER OF INTERFACE ELE. IN FOUNDATION-  0
NUMBER OF INTERFACE MATERIALS-----------  0
TOTAL NUMBER OF SOIL ELEMENTS---------- 78
NUMBER OF DIFF  SOIL MATERIALS---------  3
NUMBER OF ELEMENTS IN FOUNDATION------- 36
NUMBER OF NODES IN FOUNDATION---------- 52
NUMBER OF PREEXISTING ELEMENTS---------  0
NUMBER OF PREEXISTING NODES------------  0
NUMBER OF CONSTRUCTION LAYERS----------  6
NUMBER OF LOAD CASES-------------------  1

CALING FACTOR ---------      1 00000

ATMOSPHERIC PRESSURE ---      1.05800

UNIT WEIGHT OF WATER ---       03120


OMPUTATION SEQUENCE FOR A TOTAL OF     7  INCREMENTS
-------------------------------------------------------

 INCREMENT NO.  1      PUT ON LAYER NO.  1

 INCREMENT NO.  2      PUT ON LAYER NO.  2

 INCREMENT NO.  3      PUT ON LAYER NO.  3

 INCREMENT NO.  4      PUT ON LAYER NO.  4

 INCREMENT NO.  5      PUT ON LAYER NO.  5

 INCREMENT NO   6      PUT ON LAYER NO.  6

 INCREMENT NO.  7      APPLY LOAD CASE   1
```

NODAL POINT INPUT DATA

NODE NUMBER	NODAL POINT COORDINATES X-ORD	Y-ORD	B.C. CODE X	Y	ZZ
1	.000	.000	1	1	1
2	10.000	.000	1	1	1
3	20.000	.000	1	1	1
4	30.000	.000	1	1	1
5	38.000	.000	1	1	1
6	42.000	.000	1	1	1
7	50.000	.000	1	1	1
8	54.000	.000	1	1	1
9	58.000	.000	1	1	1
10	66.000	.000	1	1	1
11	74.000	.000	1	1	1
12	82.000	.000	1	1	1
13	90.000	.000	1	1	1
14	.000	4.000	1	0	1
15	10.000	4.000	0	0	0
16	20.000	4.000	0	0	0
17	30.000	4.000	0	0	0
18	38.000	4.000	0	0	0
19	42.000	4.000	0	0	0
20	50.000	4.000	0	0	0
21	54.000	4.000	0	0	0
22	58.000	4.000	0	0	0
23	66.000	4.000	0	0	0
24	74.000	4.000	0	0	0
25	82.000	4.000	0	0	0
26	90.000	4.000	1	0	1
27	.000	7.000	1	0	1
28	10.000	7.000	0	0	0
29	20.000	7.000	0	0	0
30	30.000	7.000	0	0	0
31	38.000	7.000	0	0	0
32	42.000	7.000	0	0	0
33	50.000	7.000	0	0	0
34	54.000	7.000	0	0	0
35	58.000	7.000	0	0	0
36	66.000	7.000	0	0	0
37	74.000	7.000	0	0	0
38	82.000	7.000	0	0	0
39	90.000	7.000	1	0	1
40	.000	10.000	1	0	1
41	10.000	10.000	0	0	0
42	20.000	10.000	0	0	0
43	30.000	10.000	0	0	0
44	38.000	10.000	0	0	0
45	42.000	10.000	0	0	0
46	50.000	10.000	0	0	0
47	54.000	10.000	0	0	0
48	58.000	10.000	0	0	0
49	66.000	10.000	0	0	0
50	74.000	10.000	0	0	0
51	82.000	10.000	0	0	0
52	90.000	10.000	1	0	1
53	38.000	11.500	0	0	0
54	42.000	11.500	0	0	0
55	50.000	11.500	0	0	0
56	54.000	11.500	0	0	0
57	58.000	11.500	0	0	0
58	66.000	11.500	0	0	0
59	74.000	11.500	0	0	0
60	82.000	11.500	0	0	0
61	90.000	11.500	1	0	1
62	42.000	13.000	0	0	0
63	50.000	13.000	0	0	0
64	54.000	13.000	0	0	0
65	58.000	13.000	0	0	0
66	66.000	13.000	0	0	0
67	74.000	13.000	0	0	0
68	82.000	13.000	0	0	0
69	90.000	13.000	1	0	1
70	46.000	14.000	0	0	0
71	50.000	14.000	0	0	0
72	54.000	14.000	0	0	0
73	58.000	14.000	0	0	0
74	66.000	14.000	0	0	0
75	74.000	14.000	0	0	0
76	82.000	14.000	0	0	0
77	90.000	14.000	1	0	1
78	50.000	15.000	0	0	0
79	54.000	15.000	0	0	0
80	58.000	15.000	0	0	0
81	66.000	15.000	0	0	0
82	74.000	15.000	0	0	0
83	82.000	15.000	0	0	0
84	90.000	15.000	1	0	1
85	54.000	16.000	0	0	0
86	58.000	16.000	0	0	0
87	66.000	16.000	0	0	0
88	74.000	16.000	0	0	0
89	82.000	16.000	0	0	0
90	90.000	16.000	1	0	1
91	58.000	17.000	0	0	0
92	66.000	17.000	0	0	0
93	74.000	17.000	0	0	0
94	82.000	17.000	0	0	0
95	90.000	17.000	1	0	1

BAR ELEMENTS-------

MATERIAL NUMBER	E	AREA	WEIGHT/LENGTH
1	30.	1.00	0.

ELMT NO.	CONNECTED NODES I	J	MATL NO.
1	43	44	1
2	44	45	1
3	45	46	1
4	46	47	1
5	47	48	1
6	48	49	1
7	34	35	1
7	49	50	1
8	50	51	1
9	51	52	1

SOIL MATERIAL PROPERTY DATA

MATL	UNIT WT	YOUNG'S MODULUS CONSTANT	EXPONENT	RATIO	BULK MODULUS CONSTANT	EXPONENT	STRENGTH PARAMETERS C	PHI	DPHI	KO
1	.0880	8000.00	.500	.500	1500.00	.500	.00	35.00	.00	.50
2	.0830	40.00	.300	.800	20.00	.200	.05	.00	.00	.50
3	.0800	1000.00	.400	.700	500.00	.500	.50	40.00	.00	.50

FOUR NODES SOLID ELEMENT DATA

ELET NO.	CONNECTED NODES I	J	K	L	MATL NO.	ELEMENT CENTER COORDINATES X-ORD	Y-ORD
1	1	2	15	14	3	5.000	2.000
2	2	3	16	15	3	15.000	2.000
3	3	4	17	16	3	25.000	2.000
4	4	5	18	17	2	33.000	2.000
5	5	6	19	18	2	39.000	2.000
6	6	7	20	19	2	46.000	2.000
7	7	8	21	20	2	52.000	2.000
8	8	9	22	21	2	58.000	2.000
9	9	10	23	22	3	62.000	2.000
10	10	11	24	23	3	70.000	2.000
11	11	12	25	24	3	78.000	2.000
12	12	13	26	25	3	86.000	2.000
13	14	15	28	27	3	5.000	5.500
14	15	16	29	28	3	15.000	5.500
15	16	17	30	29	2	25.000	5.500
16	17	18	31	30	2	33.000	5.500
17	18	19	32	31	2	39.000	5.500
18	19	20	33	32	2	46.000	5.500
19	20	21	34	33	2	52.000	5.500
20	21	22	35	34	2	58.000	5.500
21	22	23	36	35	2	62.000	5.500
22	23	24	37	36	3	70.000	5.500
23	24	25	38	37	3	78.000	5.500
24	25	26	39	38	3	86.000	5.500
25	27	28	41	40	3	5.000	8.500
26	28	29	42	41	2	15.000	8.500
27	29	30	43	42	2	25.000	8.500
28	30	31	44	43	2	33.000	8.500
29	31	32	45	44	2	39.000	8.500
30	32	33	46	45	2	46.000	8.500
31	33	34	47	46	2	52.000	8.500
32	34	35	48	47	2	58.000	8.500
33	35	36	49	48	2	62.000	8.500
34	36	37	50	49	2	70.000	8.500
35	37	38	51	50	3	78.000	8.500
36	38	39	52	51	3	86.000	8.500
37	43	44	53	53	1	34.500	10.750
38	44	45	54	53	1	39.000	10.750
39	45	46	55	54	1	46.000	10.750
40	46	47	56	55	1	52.000	10.750
41	47	48	57	56	1	58.000	10.750
42	48	49	58	57	1	62.000	10.750
43	49	50	59	58	1	70.000	10.750
44	50	51	60	59	1	78.000	10.750
45	51	52	61	60	1	86.000	10.750
46	53	54	62	32	1	40.500	12.250
47	54	55	63	62	1	46.000	12.250
48	55	56	64	63	1	52.000	12.250
49	56	57	65	64	1	58.000	12.250
50	57	58	66	65	1	62.000	12.250
51	58	59	67	66	1	70.000	12.250
52	59	60	68	67	1	78.000	12.250
53	60	61	69	68	1	86.000	12.250
54	62	63	71	70	1	47.000	13.500
55	63	64	72	71	1	52.000	13.500
56	64	65	73	72	1	58.000	13.500
57	65	66	74	73	1	62.000	13.500
58	66	67	75	74	1	70.000	13.500
59	67	68	76	75	1	78.000	13.500
60	68	69	77	76	1	86.000	13.500
61	70	71	78	76	1	49.000	14.500
62	71	72	79	78	1	52.000	14.500
63	72	73	80	79	1	58.000	14.500
64	73	74	81	80	1	62.000	14.500
65	74	75	82	81	1	70.000	14.500
66	75	76	83	82	1	78.000	14.500
67	76	77	84	83	1	86.000	14.500
68	78	79	86	85	1	53.000	15.500
69	79	80	86	85	1	58.000	15.500
70	80	81	87	86	1	62.000	15.300
71	81	82	88	87	1	70.000	15.500
72	82	83	89	88	1	78.000	15.500
73	83	84	90	89	1	86.000	15.500
74	85	86	91	91	1	57.000	16.500
75	86	87	92	91	1	62.000	16.500
76	87	88	93	92	1	70.000	16.500
77	88	89	94	93	1	78.000	16.500
78	89	90	95	94	1	86.000	16.500

```
SSTIPN: 1 LAYER OF GEOTEXTILE, P=1000 PPI, T=0

**************************************************
**************************************************
*                                                *
*  LOAD CASE ----------------------------    1   *
*                                                *
**************************************************
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LARGEST ELE. NO. IN THIS INCREMENT   78

LARGEST N P  NO  IN THIS INCREMENT   86

BAND WIDTH-----------------------  40

TOTAL NUMBER OF EQUATIONS--------- 222

NUMBER OF EQUATIONS IN BLOCK------  86

NUMBER OF BLOCKS-----------------   3

NUMBER OF N.P. FORCE CARDS--------  3

NUMBER OF PRESSURE CARDS----------  0
```

NODAL POINT FORCES (WEIGHTS OF ADDED ELEMENTS)

NP	X-FORCE	Y-FORCE
1	0.	0.
2	0.	0.
3	0.	0.
4	0.	0.
5	0.	0.
6	0.	0.
7	0.	0.
8	0.	0.
9	0.	0.
10	0.	0.
11	0.	0.
12	0.	0.
13	0.	0.
14	0.	0.
15	0.	0.
16	0.	0.
17	0.	0.
18	0.	0.
19	0.	0.
20	0.	0.
21	0.	0.
22	0.	0.
23	0.	0.
24	0.	0.
25	0.	0.
26	0.	0.
27	0.	0.
28	0.	0.
29	0.	0.
30	0.	0.
31	0.	0.
32	0.	0.
33	0.	0.
34	0.	0.
35	0.	0.
36	0.	0.
37	0.	0.
38	0.	0.
39	0.	0.
40	0.	0.
41	0.	0.
42	0.	0.
43	0.	0.
44	0.	0.
45	0.	0.
46	0.	0.
47	0.	0.
48	0.	0.
49	0.	0.
50	0.	0.
51	0.	0.
52	0.	0.
53	0.	0.
54	0.	0.
55	0.	0.
56	0.	0.
57	0.	0.
58	0.	0.
59	0.	0.
60	0.	0.
61	0.	0.
62	0.	0.
63	0.	0.
64	0.	0.
65	0.	0.
66	0.	0.
67	0.	0.
68	0.	0.
69	0.	0.
70	0.	0.
71	0.	0.
72	0.	0.
73	0.	0.
74	0.	0.
75	0.	0.
76	0.	0.
77	0.	0.
78	0.	0.
79	0.	0.
80	0.	0.
81	0.	0.
82	0.	0.
83	0.	0.
84	0.	0.
85	0.	0.
86	0.	0.
87	0.	0.
88	0.	0.
89	0.	0.
90	0.	0.
91	0.	0.
92	0.	-4.50
93	0.	-4.50
94	0.	-2.00
95	0.	0.

LOAD CASE : 1 ITERATION : 2

NP	DELTA-X	DELTA-Y	DELTA-ZZ	X-DISP	Y-DISP	ZZ-ROTAT	TOTAL	NP
1	.0000	.0000	.0000	.0000	.0000	.0000	.0000	1
2	.0000	.0000	.0000	.0000	.0000	.0000	.0000	2
3	.0000	.0000	.0000	.0000	.0000	.0000	.0000	3
4	.0000	.0000	.0000	.0000	.0000	.0000	.0000	4
5	.0000	.0000	.0000	.0000	.0000	.0000	.0000	5
6	.0000	.0000	.0000	.0000	.0000	.0000	.0000	6
7	.0000	.0000	.0000	.0000	.0000	.0000	.0000	7
8	.0000	.0000	.0000	.0000	.0000	.0000	.0000	8
9	.0000	.0000	.0000	.0000	.0000	.0000	.0000	9
10	.0000	.0000	.0000	.0000	.0000	.0000	.0000	10
11	.0000	.0000	.0000	.0000	.0000	.0000	.0000	11
12	.0000	.0000	.0000	.0000	.0000	.0000	.0000	12
13	.0000	.0000	.0000	.0000	.0000	.0000	.0000	13
14	.0000	.0000	.0000	.0000	.0000	.0000	.0000	14
15	.0000	.0000	.0000	-.0002	.0000	.0000	.0002	15
16	-.0001	-.0001	.0000	-.0005	-.0006	.0000	.0007	16
17	-.0004	.0002	.0000	-.0051	.0021	.0000	.0055	17
18	-.0217	.0102	.0000	-.2399	.0598	.0000	.2473	18
19	-.0405	.0027	.0000	-.3664	-.0641	.0000	.3640	19
20	-.0379	-.0089	.0000	-.2240	-.1379	.0000	.2630	20
21	-.0230	-.0183	.0000	-.0822	-.1563	.0000	.1833	21
22	-.0005	-.0001	.0000	-.0007	-.0052	.0000	.0053	22
23	-.0013	-.0019	.0000	-.0005	-.0051	.0000	.0032	23
24	.0009	-.0085	.0000	.0015	-.0113	.0000	.0114	24
25	.0024	-.0019	.0000	.0025	-.0053	.0000	.0058	25
26	.0000	.0008	.0000	.0000	-.0022	.0000	.0022	26
27	.0000	.0000	.0000	.0000	.0001	.0000	.0001	27
28	.0000	.0000	.0000	.0000	-.0003	.0000	.0003	28
29	-.0002	.0000	.0000	-.0020	.0004	.0000	.0020	29
30	-.0317	.0070	.0000	-.2823	.0730	.0000	.3013	30
31	-.0538	.0224	.0000	-.4279	.1187	.0000	.4439	31
32	-.0785	.0095	.0000	-.5118	-.1111	.0000	.5238	32
33	-.0835	-.0108	.0000	-.4272	-.2780	.0000	.5102	33
34	-.0980	-.0223	.0000	-.3498	-.2804	.0000	.4483	34
35	-.0819	-.0293	.0000	-.2426	-.1981	.0000	.3075	35
36	-.0014	-.0049	.0000	-.0001	-.0144	.0000	.0144	36
37	.0019	-.0130	.0000	.0025	-.0212	.0000	.0213	37
38	.0028	-.0033	.0000	.0028	-.0100	.0000	.0103	38
39	.0000	.0025	.0000	.0000	-.0035	.0000	.0035	39
40	.0000	.0000	.0000	.0000	.0001	.0000	.0001	40
41	.0000	.0000	.0000	.0002	-.0005	.0000	.0004	41
42	-.0278	.0123	.0000	-.1892	.0685	.0000	.2005	42
43	-.0813	.0175	.0000	-.4126	.1120	.0000	.4275	43
44	-.0942	.0297	.0000	-.4334	.1295	.0000	.4523	44
45	-.0948	.0135	.0000	-.4220	-.1555	.0000	.4601	45
46	-.0957	-.0111	.0000	-.3858	-.3874	.0000	.5327	46
47	-.0963	-.0267	.0000	-.3174	-.3883	.0000	.5015	47
48	-.0948	-.0343	.0000	-.2585	-.3177	.0000	.4098	48
49	-.0534	-.0341	.0000	-.1067	-.2423	.0000	.2644	49
50	-.0025	-.0325	.0000	-.0080	-.0504	.0000	.0508	50
51	.0003	-.0021	.0000	-.0009	-.0108	.0000	.0109	51
52	.0000	.0039	.0000	.0000	-.0082	.0000	.0082	52
53	-.0503	.0287	.0000	-.6850	.1858	.0000	.7047	53
54	-.0505	.0135	.0000	-.5958	-.1424	.0000	.6124	54
55	-.0908	-.0111	.0000	-.3798	-.3711	.0000	.5310	55
56	-.0916	-.0281	.0000	-.3208	-.4081	.0000	.5190	56
57	-.0906	-.0377	.0000	-.2498	-.3463	.0000	.4285	57
58	-.0532	-.1053	.0000	-.1110	-.2880	.0000	.3087	58
59	-.0081	-.0385	.0000	.0385	-.1049	.0000	.1111	59
60	-.0031	-.0013	.0000	-.0043	-.0090	.0000	.0100	60
61	.0000	.0037	.0000	.0000	-.0049	.0000	.0049	61
62	-.0865	.0138	.0000	-.1650	.0087	.0000	.1652	62
63	-.1604	.0017	.0000	-.2344	-.1461	.0000	.2773	63
64	-.1596	-.0670	.0000	-.2344	-.2604	.0000	.3504	64
65	-.1391	.0008	.0000	-.2107	-.1998	.0000	.2902	65
66	-.0183	-.2873	.0000	-.0852	-.3906	.0000	.3960	66
67	-.0146	-.0648	.0000	-.0343	-.1385	.0000	.1431	67
68	-.0077	-.0004	.0000	-.0083	-.0088	.0000	.0114	68
69	.0000	.0029	.0000	.0000	-.0036	.0000	.0036	69
70	-.1282	.0151	.0000	-.1906	-.0288	.0000	.1926	70
71	-.1431	.0018	.0000	-.2068	-.0881	.0000	.2281	71
72	-.1427	-.0875	.0000	-.2056	-.2033	.0000	.2892	72
73	-.1339	-.0170	.0000	-.1957	-.1845	.0000	.2556	73
74	-.0501	-.2897	.0000	-.1033	-.3714	.0000	.3855	74
75	-.0372	-.0481	.0000	-.0604	-.1504	.0000	.1620	75
76	-.0084	-.0012	.0000	-.0079	-.0064	.0000	.0102	76
77	.0000	.0027	.0000	.0000	-.0023	.0000	.0023	77
78	-.1845	.0058	.0000	-.2016	-.0646	.0000	.2089	78
79	-.1848	-.0859	.0000	-.2328	-.1488	.0000	.2767	79
80	-.2288	-.0119	.0000	-.2858	-.1062	.0000	.2883	80
81	-.2600	-.4791	.0000	-.2987	-.5340	.0000	.6124	81
82	.5327	-.2809	.0000	.4941	-.3499	.0000	.6054	82
83	1.1879	-.0509	.0000	1.1884	-.0549	.0000	1.1877	83
84	.0300	.1317	.0000	.0000	.1282	.0000	.1282	84
85	-.2018	-.0588	.0000	-.2181	-.0842	.0000	.2319	85
86	-.2204	-.0076	.0000	-.2382	-.0395	.0000	.2395	86
87	-.2017	-.4840	.0000	-.2177	-.5106	.0000	.5550	87
88	.9341	-.6196	.0000	.8869	-.6727	.0000	1.1146	88
89	1.6678	-.0526	.0000	1.6589	-.0738	.0000	1.6606	89
90	.0000	.3922	.0000	.0000	.3738	.0000	.3738	90
91	-.9016	.0521	.0000	-.9016	.0521	.0000	.9031	91
92	-.4258	-.7798	.0000	-.4258	-.7768	.0000	.8875	92
93	1.2409	-.9420	.0000	1.2409	-.9420	.0000	1.5579	93
94	1.7100	-.0415	.0000	1.7100	-.0415	.0000	1.7105	94
95	.0000	.6569	.0000	.0000	.6569	.0000	.6569	95

STRUCTURAL ELEMENTS - LINEAR ELASTIC

BAR ELEMENTS--INTERNAL MEMBER FORCES

ELEMENT NO.	AXIAL FORCE
INCREMENTAL VALUES	
1	-.0843
2	-.0030
3	-.0036
4	-.0043
5	.012"
6	[illegible]
7	.1907
8	.0106
9	-.0012
TOTAL VALUES	
1	-.1036
2	.0568
3	.2114
4	.3614
5	.4369
6	.5747
7	.3737

8	.0192
9	.0034

FOUR NODE SOLID ELEMENTS - MODULI AND STRAINS (STRAINS IN PERCENT)

ELE	ELAS MOD	BULK MOD	SHEAR MOD	POIS	EPS-X	EPS-Y	GAM-XY	EPS-1	EPS-3	GAMMAX	ELE
1	526.7	330.6	227.9	.156	.001	.001	.003	.002	-.001	.003	1
2	524.5	333.5	225.4	.162	.001	.007	.011	.011	-.002	.013	2
3	517.6	327.0	223.5	.158	.023	-.020	.057	.037	-.034	.071	3
4	.7	17.2	.2	.494	1.957	-.775	2.583	2.470	-1.289	3.759	4
5	.6	17.0	.2	.494	.987	.053	8.511	4.801	-3.781	8.582	5
6	.7	17.9	.2	.494	-.840	2.525	7.740	5.063	-3.377	8.440	6
7	.7	18.4	.2	.493	-1.647	3.703	4.208	4.432	-2.376	6.808	7
8	.6	18.8	.2	.494	-1.144	2.045	-.752	2.088	-1.188	3.276	8
9	456.0	338.0	188.2	.225	-.001	.130	.017	.130	-.001	.131	9
10	488.1	380.5	189.1	.235	-.013	.205	.028	.206	-.014	.220	10
11	475.5	370.7	191.5	.242	-.007	.207	-.089	.216	-.016	.232	11
12	511.6	363.6	211.6	.209	.016	.084	-.052	.102	.009	.093	12
13	437.4	257.8	194.9	.122	.001	.003	-.001	.003	.001	.002	13
14	466.0	272.6	208.6	.116	.011	-.011	.021	.015	-.015	.031	14
15	2.2	14.1	.8	.473	1.475	-1.198	4.434	2.727	-2.450	5.177	15
16	2.5	15.8	.8	.473	3.083	-2.180	7.041	4.847	-3.944	8.791	16
17	1.2	16.7	.4	.488	1.890	-.214	8.840	5.181	-3.886	8.847	17
18	.6	17.0	.2	.494	-1.389	3.135	7.455	5.238	-3.472	8.710	18
19	.6	17.0	.2	.494	-2.814	4.385	7.952	6.182	-4.411	10.593	19
20	.7	18.1	.2	.494	-2.484	5.098	5.268	5.923	-3.309	9.232	20
21	.6	17.1	.2	.494	-1.516	3.218	2.930	3.634	-1.933	5.567	21
22	389.3	330.7	155.4	.261	-.029	.316	.058	.320	-.031	.352	22
23	405.2	305.3	164.7	.230	-.008	.244	-.123	.258	-.022	.280	23
24	457.5	310.0	192.2	.190	.032	.100	-.058	.111	.021	.089	24
25	408.6	229.8	188.9	.093	-.001	.000	.002	.001	-.001	.002	25
26	.0	.1	.0	.495	.557	-1.101	2.779	1.657	-1.801	3.458	26
27	1.2	13.5	.4	.488	2.569	-1.750	4.535	3.541	-2.722	6.262	27
28	1.6	13.5	.5	.480	1.300	-.812	1.569	1.559	-1.071	2.631	28
29	1.3	14.1	.4	.485	.808	.595	2.910	2.057	-.853	2.910	29
30	.5	16.0	.2	.494	-.662	2.565	-.031	2.566	-.662	3.446	30
31	.6	16.7	.2	.494	-1.570	3.804	-1.538	3.716	-1.681	5.397	31
32	.6	16.4	.2	.494	-2.071	3.942	-2.290	4.152	-2.282	6.434	32
33	.7	17.7	.2	.494	-2.474	5.943	.469	5.950	-2.480	8.430	33
34	.7	17.4	.2	.494	-.639	4.287	.748	4.315	-.657	4.982	34
35	292.9	256.9	114.7	.277	-.033	.501	-.118	.508	-.039	.547	35
36	346.0	217.2	148.7	.155	.010	.059	-.012	.060	.010	.050	36
37	.1	4.0	.0	.495	.375	.212	17.083	8.835	-8.248	17.084	37
38	1153.0	587.4	566.3	.018	-.639	2.066	20.241	10.646	-9.602	20.451	38
39	809.6	614.6	348.6	.161	-1.684	4.053	10.409	7.127	-4.758	11.885	39
40	346.1	441.2	127.7	.355	-1.326	4.950	2.373	5.167	-1.543	6.710	40
41	407.6	449.7	153.3	.330	-1.585	5.381	-.520	5.391	-1.594	6.985	41
42	11.9	396.6	4.0	.495	-1.770	4.618	-.156	4.619	-1.771	6.390	42
43	11.9	398.5	4.0	.495	-1.512	4.027	-3.302	4.482	-1.966	6.448	43
44	709.6	630.0	277.3	.280	.224	1.926	-2.139	2.442	-.292	2.733	44
45	1087.2	655.4	488.3	.144	-.033	.045	.058	.055	-.042	.097	45
46	279.2	432.3	100.9	.383	-.036	.062	-.336	.166	-.164	.352	46
47	.1	4.0	.0	.495	.390	-.354	2.737	1.437	-1.400	2.837	47
48	.1	4.0	.0	.495	.066	1.420	5.050	3.358	-1.870	5.228	48
49	.1	4.0	.0	.495	-.724	1.244	2.597	1.480	-1.370	3.259	49
50	.1	4.0	.0	.495	-1.385	5.707	2.375	5.901	-1.578	7.478	50
51	.1	4.0	.0	.495	-.589	9.124	-2.469	9.279	-.744	10.022	51
52	628.9	545.0	246.0	.274	-.238	2.665	-.396	2.677	-.251	3.128	52
53	898.3	592.3	381.2	.178	-.086	.053	.123	.076	-.109	.185	53
54	.1	4.0	.0	.495	.704	-.424	.546	.676	-.596	1.471	54
55	179.6	419.7	63.1	.425	-.036	.147	.602	.466	-.357	.823	55
56	.1	4.0	.0	.495	-.442	1.008	-2.167	1.587	-1.020	2.607	56
57	11.9	398.8	4.0	.495	-1.490	1.220	5.152	2.775	-3.046	5.821	57
58	1787.2	957.3	843.4	.058	-.417	2.956	1.144	3.061	-.512	3.582	58
59	856.5	589.9	355.3	.204	-.446	2.769	.103	2.770	-.447	3.216	59
60	521.3	466.4	203.3	.282	-.105	.106	-.098	.117	-.116	.233	60
61	.1	4.0	.0	.495	.373	-.386	2.702	1.397	-1.409	2.807	61

62	.1	4.0	.0	.495	.362	-.243	5.526	2.839	-2.720	5.580	62
63	11.9	398.6	4.0	.495	.259	-.284	6.086	3.043	-3.088	6.111	63
64	.1	4.0	.0	.495	-.366	9.283	19.830	15.482	-6.565	22.057	64
65	1	4.0	.0	.495	-5.154	22.980	-18.917	25.864	-8.038	33.903	65
66	.1	4.0	.0	.495	-4.457	15.973	-65.160	51.006	-39.490	80.497	66
67	1	4 0	0	495	7 242	-3.918	-59 875	32 115	-28 791	60 906	67
68	.1	4.0	.0	.495	.755	-.708	2.487	1 466	-1.419	2.885	68
69	11.9	398.6	4.0	.495	.634	-.572	-1.247	.899	-.838	1.735	69
70	11.9	398.6	4.0	.495	.088	.035	2.647	1.388	-1.282	2.648	70
71	1	4.0	0	495	-11 798	19.283	-22 332	22 881	-15 385	38.268	71
72	.1	4.0	.0	.495	-8.945	20.061	-48.978	34.012	-22.906	56.916	72
73	.1	4.0	.0	.495	17.563	-11.153	-28.530	23.530	-17.020	40.550	73
74	.1	4.0	.0	.495	.464	-5.964	66.839	30.824	-38.324	67.148	74
75	1	4 0	0	495	-3 091	11 780	53 426	32 080	-23.392	55 452	75
76	.1	4.0	.0	.495	-17.514	30.862	-2.274	30.869	-17.541	48.430	76
77	.1	4.0	.0	.495	-7.517	15.567	-26.621	21.843	-13.593	35.236	77
78	.1	4.0	.0	.495	21.111	-16.787	-9.506	21.713	-16.389	38.103	78

FOUR NODE SOLID ELEMENTS - STRESSES

ELE	SIG-X	SIG-Y	TAU-XY	SIG-1	SIG-3	TAU-MAX	THETA	SIG1/SIG3	LEVEL	ELE
1	.246	484	.006	.484	.246	.119	1.464	1.967	.079	1
2	.255	523	.025	525	.253	136	5.357	2 075	069	2
3	.264	.390	.134	.507	.237	.135	41.166	2.144	.090	3
4	.377	.546	.005	.548	.377	.085	1.774	1.448	1.690	4
5	.349	.525	.017	.527	.347	.090	5.610	1.518	1.792	5
6	452	646	017	647	451	098	4 891	1 437	1 867	6
7	.515	.718	.009	.718	.514	.102	2.560	1.397	2.040	7
8	.317	.509	-.001	.509	.317	.096	-.424	1.610	1.929	8
9	.333	1.022	.028	1.023	.332	.346	2.130	3.083	.207	9
10	401	1 437	.051	1 440	399	520	2.828	3 611	291	10
11	.444	1.469	-.172	1.497	.416	.541	-9.262	3.603	.267	11
12	.379	.875	-.109	.898	.356	.271	-11.888	2.521	.158	12
13	.141	283	-.002	.283	.141	.071	- 649	2.002	.053	13
14	181	224	042	250	155	047	31 789	1 612	035	14
15	.140	.205	.020	.210	.134	.038	15.523	1.571	.765	15
16	.258	.275	.042	.310	.225	.043	39.584	1.379	.862	16
17	.319	.395	.023	.402	.312	.045	15.443	1.288	.893	17
18	.352	458	.015	.460	.350	.055	7 867	1.316	1 106	18
19	.347	.464	.016	.466	.345	.060	7.714	1.350	1.209	19
20	.494	.616	.012	.617	.493	.062	5.618	1.252	1.241	20
21	.340	.449	.006	.450	.339	.055	3.158	1.328	1 104	21
22	366	1 635	084	1 641	361	.640	3 785	4 547	372	22
23	.323	1.267	-.204	1.308	.281	.514	-11.675	4.651	.326	23
24	.316	.620	-.113	.658	.281	.188	-18.380	2.340	.119	24
25	.041	.081	.003	.091	.041	.025	3.442	2.210	.022	25
26	001	- 006	.003	002	- 007	005	68.919	- 315	-1 000	26
27	.087	.010	.012	.089	.008	.045	82.463	12.234	.907	27
28	.111	.041	.028	.121	.030	.045	70.229	3.978	.906	28
29	.131	.212	.014	.214	.128	.043	9.711	1.670	.880	29
30	187	291	-.003	.291	186	052	-1 529	1 561	1 046	30
31	.240	.347	-.005	.348	.240	.054	-2.614	1.448	1.075	31
32	.212	.321	-.012	.323	.211	.056	-6.341	1.533	1.123	32
33	.481	.602	.002	.602	.481	.060	1.043	1.251	1.207	33
34	525	626	.005	626	.525	051	2 897	1.193	1 011	34
35	.446	1.616	-.130	1.626	.433	.597	-6.362	4.219	.377	35
36	.065	.248	-.015	.249	.064	.093	-4.686	3.900	.078	36
37	.139	.092	-.099	.216	.014	.102	-51.317	15.785	5.498	37
38	159	.106	.027	.170	095	038	67 512	1 797	296	38
39	.120	264	.031	.281	.114	.074	12.421	2.301	.483	39
40	.087	.231	.139	.310	-.012	.161	29.885	-24.844	-1.000	40
41	.093	.770	-.112	.788	.075	.356	-9.155	10.518	3.537	41
42	-.112	.383	.004	383	-.112	.247	.463	-3.434	-1.000	42
43	-.268	.370	-.118	.391	-.290	.340	-10.131	-1.349	-1.000	42
44	.267	1.938	-.203	1.962	.242	.860	-6.813	8.092	2.836	44
45	-.141	.180	.244	.312	-.273	.292	28.337	-1.143	-1.000	45
46	.040	046	.021	.064	.022	.021	41.018	2.888	.702	46
47	.058	.131	.113	.213	-.025	.119	36.097	-8.606	-1.000	47
48	085	.289	.054	302	.071	115	14 070	4 233	1 202	48
49	.036	.314	-.112	.353	-.004	.178	-19.441	-95.182	-1.000	49
50	.213	.375	-.052	.390	.198	.096	-16.439	1.972	.361	50
51	.273	.580	-.100	.610	.243	.183	-16.554	2.509	.561	51
52	- 035	1 498	-.287	1.543	- 080	.812	-9.616	-19.249	-1.000	52
53	-.665	.149	.427	.346	-.781	.563	24.866	-.441	-1.000	53
54	.032	.061	.124	.171	-.078	.125	41.632	-2.200	-1.000	54
55	-.030	.241	.028	.244	-.033	.138	5.950	-7.421	-1.000	55
56	-.044	285	.002	.285	-.044	165	401	-6 468	-1 000	56
57	-1.241	-.857	.123	-.821	-1.277	.228	16.287	.643	-1.000	57
58	-1.538	2.497	-1.909	3.256	-2.298	2.777	-21.717	-1.419	-1.000	58
59	-2.180	.208	1.877	1.237	-3.211	2.224	28 779	-.385	-1.000	59
60	-.389	384	-.207	438	- 412	425	-14 584	-1 062	-1 000	60
61	.010	.024	.003	.025	.009	.008	12.793	2.768	.864	61
62	.152	.129	.134	.275	.006	.134	47.378	46.691	16.984	62
63	.052	-.123	.421	.394	-.465	.430	50.884	-.847	-1.000	63
64	.409	.562	-.133	638	.333	153	-30 076	1 919	342	64
65	.718	.756	-.008	.757	.715	.021	-10.485	1.059	.022	65
66	.468	.501	-.035	.523	.446	.039	-32.329	1.175	.065	66
67	.252	.334	-.023	.340	.246	.047	-14.822	1.385	.143	67
68	-.011	.035	.026	.047	- 023	035	24 102	-2.032	-1 000	68
69	.319	.239	.047	.340	.218	.061	65.262	1.562	.209	69
70	.474	.579	.057	.603	.449	.077	23.612	1.343	.128	70
71	.302	.344	-.009	.346	.300	.023	-11.545	1.151	.056	71
72	448	486	- 020	496	440	020	-22 113	1 127	047	72
73	.288	.282	-.011	.297	.273	.012	-52.358	1.086	.032	73
74	-.208	-.205	.029	-.178	-.235	.029	43.318	.758	-1.000	74
75	.357	.385	.021	.397	.345	.026	27.949	1.148	.055	75
76	530	585	- 001	585	530	028	- 934	1 106	039	76
77	.329	.364	-.011	.367	.326	.021	-16.471	1.127	.047	77
78	.244	.232	-.004	.245	.230	.007	-74.301	1.063	.023	78

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SSTIPN: 1 LAYER OF GEOTEXTILE, P=1000 PPI, T=1000

TOTAL NUMBER OF NODES------------------- 85
NUMBER OF BAR ELEMENTS------------------  9
NUMBER OF DIFF. BAR MATERIALS-----------  1
NUMBER OF BEAM ELEMENTS-----------------  0
NUMBER OF DIFF. BEAM MATERIALS----------  0
NUMBER OF NODAL LINKS ------------------  0
NUMBER OF INTERFACE ELEMENTS------------  0
NO  OF INTERFACE ELE  IN PREEXIST  PART  0
NUMBER OF INTERFACE ELE. IN FOUNDATION-  0
NUMBER OF INTERFACE MATERIALS-----------  0
TOTAL NUMBER OF SOIL ELEMENTS----------- 78
NUMBER OF DIFF  SOIL MATERIALS----------  3
NUMBER OF ELEMENTS IN FOUNDATION-------- 36
NUMBER OF NODES IN FOUNDATION----------- 52
NUMBER OF PREEXISTING ELEMENTS----------  0
NUMBER OF PREEXISTING NODES-------------  0
NUMBER OF CONSTRUCTION LAYERS-----------  6
NUMBER OF LOAD CASES--------------------  2

CALING FACTOR ----------       1 00000

ATMOSPHERIC PRESSURE ---      1.05800

UNIT WEIGHT OF WATER ---        03120


OMPUTATION SEQUENCE FOR A TOTAL OF    8  INCREMENTS
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 INCREMENT NO.  1      APPLY LOAD CASE   1

 INCREMENT NO.  2      PUT ON LAYER NO.  1

 INCREMENT NO.  3      PUT ON LAYER NO.  2

 INCREMENT NO.  4      PUT ON LAYER NO.  3

 INCREMENT NO.  5      PUT ON LAYER NO   4

 INCREMENT NO.  6      PUT ON LAYER NO.  5

 INCREMENT NO.  7      PUT ON LAYER NO.  6

 INCREMENT NO.  8      APPLY LOAD CASE   2
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NODAL POINT INPUT DATA

NODE NUMBER	NODAL POINT COORDINATES X-ORD	Y-ORD	B.C. CODE X	Y	ZZ
1	.000	.000	1	1	1
2	10.000	.000	1	1	1
3	20.000	.000	1	1	1
4	30.000	.000	1	1	1
5	38.000	.000	1	1	1
6	42.000	.000	1	1	1
7	50.000	.000	1	1	1
8	54.000	.000	1	1	1
9	58.000	.000	1	1	1
10	66.000	.000	1	1	1
11	74.000	.000	1	1	1
12	82.000	.000	1	1	1
13	90.000	.000	1	1	1
14	.000	4.000	1	0	1
15	10.000	4.000	0	0	0
16	20.000	4.000	0	0	0
17	30.000	4.000	0	0	0
18	38.000	4.000	0	0	0
19	42.000	4.000	0	0	0
20	50.000	4.000	0	0	0
21	54.000	4.000	0	0	0
22	58.000	4.000	0	0	0
23	66.000	4.000	0	0	0
24	74.000	4.000	0	0	0
25	82.000	4.000	0	0	0
26	90.000	4.000	1	0	1
27	.000	7.000	1	0	1
28	10.000	7.000	0	0	0
29	20.000	7.000	0	0	0
30	30.000	7.000	0	0	0
31	38.000	7.000	0	0	0
32	42.000	7.000	0	0	0
33	50.000	7.000	0	0	0
34	54.000	7.000	0	0	0
35	58.000	7.000	0	0	0
36	66.000	7.000	0	0	0
37	74.000	7.000	0	0	0
38	82.000	7.000	0	0	0
39	90.000	7.000	1	0	1
40	.000	10.000	1	0	1
41	10.000	10.000	0	0	0
42	20.000	10.000	0	0	0
43	30.000	10.000	0	0	0
44	38.000	10.000	0	0	0
45	42.000	10.000	0	0	0
46	50.000	10.000	0	0	0
47	54.000	10.000	0	0	0
48	58.000	10.000	0	0	0
49	66.000	10.000	0	0	0
50	74.000	10.000	0	0	0
51	82.000	10.000	0	0	0
52	90.000	10.000	1	0	1
53	38.000	11.500	0	0	0
54	42.000	11.500	0	0	0
55	50.000	11.500	0	0	0
56	54.000	11.500	0	0	0
57	58.000	11.500	0	0	0
58	66.000	11.500	0	0	0
59	74.000	11.500	0	0	0
60	82.000	11.500	0	0	0
61	90.000	11.500	1	0	1
62	42.000	13.000	0	0	0
63	50.000	13.000	0	0	0
64	54.000	13.000	0	0	0
65	58.000	13.000	0	0	0
66	66.000	13.000	0	0	0
67	74.000	13.000	0	0	0
68	82.000	13.000	0	0	0
69	90.000	13.000	1	0	1
70	46.000	14.000	0	0	0
71	50.000	14.000	0	0	0
72	54.000	14.000	0	0	0
73	58.000	14.000	0	0	0
74	66.000	14.000	0	0	0
75	74.000	14.000	0	0	0
76	82.000	14.000	0	0	0
77	90.000	14.000	1	0	1
78	50.000	15.000	0	0	0
79	54.000	15.000	0	0	0
80	58.000	15.000	0	0	0
81	66.000	15.000	0	0	0
82	74.000	15.000	0	0	0
83	82.000	15.000	0	0	0
84	90.000	15.000	1	0	1
85	54.000	16.000	0	0	0
86	58.000	16.000	0	0	0
87	66.000	16.000	0	0	0
88	74.000	16.000	0	0	0
89	82.000	16.000	0	0	0
90	90.000	16.000	1	0	1
91	58.000	17.000	0	0	0
92	66.000	17.000	0	0	0
93	74.000	17.000	0	0	0
94	82.000	17.000	0	0	0
95	90.000	17.000	1	0	1

BAR ELEMENTS-------

MATERIAL NUMBER	E	AREA	WEIGHT/LENGTH
1	30.	1.00	0.

ELMT NO.	CONNECTED NODES I	J	MATL NO.
1	43	44	1
2	44	45	1
3	45	46	1
4	46	47	1
5	47	48	1
6	48	49	1
7	34	35	1
7	49	50	1
8	50	51	1
9	51	52	1

SOIL MATERIAL PROPERTY DATA

MATL	UNIT WT	YOUNG'S MODULUS CONSTANT	EXPONENT	RATIO	BULK MODULUS CONSTANT	EXPONENT	STRENGTH PARAMETERS C	PHI	DPHI	KO
1	0880	6000 00	500	500	1500 00	600	00	35 00	00	50
2	.0530	40.00	.300	.600	20.00	.200	.05	.00	.00	.50
3	.0800	1000.00	.400	.700	500.00	500	.50	40.00	.00	.50

FOUR NODES SOLID ELEMENT DATA

ELET NO.	CONNECTED NODES I	J	K	L	MATL NO.	ELEMENT CENTER COORDINATES X-ORD	Y-ORD
1	1	2	15	14	3	5.000	2.000
2	2	3	16	15	3	15.000	2 000
3	3	4	17	16	3	25.000	2.000
4	4	5	18	17	2	33.000	2.000
5	5	6	19	18	2	39.000	2.000
6	6	7	20	19	2	46 000	2 000
7	7	8	21	20	2	52.000	2.000
8	8	9	22	21	2	56.000	2.000
9	9	10	23	22	3	62.000	2.000
10	10	11	24	23	3	70.000	2 000
11	11	12	25	24	3	78.000	2.000
12	12	13	26	25	3	86.000	2.000
13	14	15	28	27	3	5.000	5.500
14	15	16	29	28	3	15 000	5 500
15	16	17	30	29	2	25.000	5.500
16	17	18	31	30	2	33.000	5.500
17	18	19	32	31	2	39.000	5.500
18	19	20	33	32	2	46.000	5.500
19	20	21	34	33	2	52.000	5.500
20	21	22	35	34	2	56.000	5.500
21	22	23	36	35	2	62.000	5.500
22	23	24	37	36	3	70.000	5.500
23	24	25	38	37	3	78.000	5.500
24	25	26	39	38	3	86 000	5 500
25	27	28	41	40	3	5.000	8.500
26	28	29	42	41	2	15.000	8.500
27	29	30	43	42	2	25.000	8.500
28	30	31	44	43	2	33 000	8.500
29	31	32	45	44	2	39.000	8.500
30	32	33	46	45	2	46.000	8.500
31	33	34	47	46	2	52.000	8.500
32	34	35	48	47	2	56 000	8 500
33	35	36	49	48	2	62.000	8.500
34	36	37	50	49	2	70.000	8.500
35	37	38	51	50	3	78.000	8.500
36	38	39	52	51	3	86.000	8 500
37	43	44	53	53	1	34.500	10.750
38	44	45	54	53	1	39.000	10.750
39	45	46	55	54	1	46.000	10.750
40	46	47	56	55	1	52 000	10 750
41	47	48	57	56	1	56.000	10.750
42	48	49	58	57	1	62.000	10.750
43	49	50	59	58	1	70.000	10.750
44	50	51	60	59	1	78.000	10 750
45	51	52	61	60	1	86.000	10.750
46	53	54	62	62	1	40.500	12.250
47	54	55	63	62	1	46.000	12.250
48	55	56	64	63	1	52 000	12 250
49	56	57	65	64	1	56.000	12.250
50	57	58	66	65	1	62.000	12.250
51	58	59	67	66	1	70.000	12.250
52	59	60	68	67	1	78 000	12 250
53	60	61	69	68	1	86.000	12.250
54	62	63	71	70	1	47.000	13.500
55	63	64	72	71	1	52.000	13.500
56	64	65	73	72	1	56 000	13 500
57	65	66	74	73	1	62.000	13.500
58	66	67	75	74	1	70.000	13.500
59	67	68	76	75	1	78.000	13.500
60	68	69	77	76	1	86 000	13 500
61	70	71	78	77	1	49.000	14.500
62	71	72	79	78	1	52.000	14.500
63	72	73	80	79	1	56.000	14.500
64	73	74	81	80	1	62 000	14 500
65	74	75	82	81	1	70.000	14.500
66	75	76	83	82	1	78.000	14.500
67	76	77	84	83	1	86.000	14.500
68	78	79	85	84	1	53 000	15.500
69	79	80	86	85	1	56.000	15.500
70	80	81	87	86	1	62.000	15.500
71	81	82	88	87	1	70.000	15.500
72	82	83	89	88	1	78 000	15 500
73	83	84	90	89	1	86.000	15.500
74	85	86	91	91	1	57.000	16.500
75	86	87	92	31	1	62.000	16.500
76	87	88	93	92	1	70 000	16 500
77	88	89	94	93	1	78.000	16.500
78	89	90	95	94	1	86.000	16.500

CONSTRUCTION LAYER INFORMATION

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SSTIPN: 1 LAYER OF GEOTEXTILE, P=1000 PPI, T=1000

*******************************************************
*******************************************************
*                                                     *
*  LOAD CASE ------------------------------     2     *
*                                                     *
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LARGEST ELE. NO. IN THIS INCREMENT   78

LARGEST N P  NO  IN THIS INCREMENT   85


BAND WIDTH-----------------------  40

TOTAL NUMBER OF EQUATIONS--------- 222

NUMBER OF EQUATIONS IN BLOCK------  84

NUMBER OF BLOCKS------------------   3

NUMBER OF N.P. FORCE CARDS--------   3

NUMBER OF PRESSURE CARDS----------   0
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NODAL POINT FORCES (WEIGHTS OF ADDED ELEMENTS)

NP	X-FORCE	Y-FORCE
1	0.	0.
2	0.	0.
3	0.	0.
4	0.	0.
5	0.	0.
6	0.	0.
7	0.	0.
8	0.	0.
9	0.	0.
10	0.	0.
11	0.	0.
12	0.	0.
13	0.	0.
14	0.	0.
15	0.	0.
16	0.	0.
17	0.	0.
18	0.	0.
19	0.	0.
20	0.	0.
21	0.	0.
22	0.	0.
23	0.	0.
24	0.	0.
25	0.	0.
26	0.	0.
27	0.	0.
28	0.	0.
29	0.	0.
30	0.	0.
31	0.	0.
32	0.	0.
33	0.	0.
34	0.	0.
35	0.	0.
36	0.	0.
37	0.	0.
38	0.	0.
39	0.	0.
40	0.	0.
41	0.	0.
42	0.	0.
43	0.	0.
44	0.	0.
45	0.	0.
46	0.	0.
47	0.	0.
48	0.	0.
49	0.	0.
50	0.	0.
51	0.	0.
52	0.	0.
53	0.	0.
54	0.	0.
55	0.	0.
56	0.	0.
57	0.	0.
58	0.	0.
59	0.	0.
60	0.	0.
61	0.	0.
62	0.	0.
63	0.	0.
64	0.	0.
65	0.	0.
66	0.	0.
67	0.	0.
68	0.	0.
69	0.	0.
70	0.	0.
71	0.	0.
72	0.	0.
73	0.	0.
74	0.	0.
75	0.	0.
76	0.	0.
77	0.	0.
78	0.	0.
79	0.	0.
80	0.	0.
81	0.	0.
82	0.	0.
83	0.	0.
84	0.	0.
85	0.	0.
86	0.	0.
87	0.	0.
88	0.	0.
89	0.	0.
90	0.	0.
91	0.	0.
92	0.	-4.50
93	0.	-4.50
94	0.	-2.00
95	0.	0.

LOAD CASE 1 2 ITERATION 2

NP	DELTA-X	DELTA-Y	DELTA-ZZ	X-DISP	Y-DISP	ZZ-ROTAT	TOTAL	NP
1	.0000	.0000	.0000	.0000	.0000	.0000	.0000	1
2	.0000	.0000	.0000	.0000	.0000	.0000	.0000	2
3	.0000	.0000	.0000	.0000	.0000	.0000	.0000	3
4	.0000	.0000	.0000	.0000	.0000	.0000	.0000	4
5	.0000	.0000	.0000	.0000	.0000	.0000	.0000	5
6	.0000	.0000	.0000	.0000	.0000	.0000	.0000	6
7	.0000	.0000	.0000	.0000	.0000	.0000	.0000	7
8	.0000	.0000	.0000	.0000	.0000	.0000	.0000	8
9	.0000	.0000	.0000	.0000	.0000	.0000	.0000	9
10	.0000	.0000	.0000	.0000	.0000	.0000	.0000	10
11	.0000	.0000	.0000	.0000	.0000	.0000	.0000	11
12	.0000	.0000	.0000	.0000	.0000	.0000	.0000	12
13	.0000	.0000	.0000	.0000	.0000	.0000	.0000	13
14	.0000	.0000	.0000	.0000	.0000	.0000	.0000	14
15	.0000	.0000	.0000	-.0003	-.0001	.0000	.0004	15
16	.0000	-.0001	.0000	-.0008	-.0007	.0000	.0011	16
17	-.0008	.0002	.0000	-.0058	.0027	.0000	.0084	17
18	-.0151	.0034	.0000	-.2487	.0583	.0000	.2554	18
19	-.0250	.0009	.0000	-.3574	-.0849	.0000	.3731	19
20	-.0240	-.0033	.0000	-.2283	-.1377	.0000	.2888	20
21	-.0171	-.0064	.0000	-.0824	-.1578	.0000	.1845	21
22	-.0005	.0000	.0030	-.0002	-.0053	.0000	.0054	22
23	-.0014	-.0021	.0000	-.0007	-.0063	.0000	.0063	23
24	.0008	-.0083	.0000	.0013	-.0111	.0000	.0111	24
25	.0043	-.0019	.0000	.0025	-.0083	.0000	.0088	25
26	.0000	.0008	.0000	.0000	-.0023	.0000	.0023	26
27	.0000	.0003	.0000	.0000	.0002	.0000	.0002	27
28	.0000	.0000	.0000	-.0001	-.0008	.0000	.0008	28
29	-.0002	.0001	.0000	-.0030	.0004	.0000	.0030	29
30	-.0379	.0048	.0000	-.3815	.0388	.0000	.3875	30
31	-.0531	.0061	.0000	-.5380	.1084	.0000	.5470	31
32	-.0733	.0033	.0000	-.5723	-.1226	.0000	.5851	32
33	-.0806	-.0082	.0000	-.4888	-.2820	.0000	.5358	33
34	-.0813	-.0047	.0000	-.2738	-.2808	.0000	.4873	34
35	-.0834	-.0273	.0000	-.2585	-.1952	.0000	.3247	35
36	-.0016	-.0084	.0000	-.0005	-.0144	.0000	.0144	36
37	.0017	-.0128	.0000	.0021	-.0207	.0000	.0208	37
38	.0027	-.0028	.0000	.0024	-.0101	.0000	.0104	38
39	.0000	.0025	.0000	.0000	-.0037	.0000	.0037	39
40	.0000	.0000	.0000	.0000	.0002	.0000	.0002	40
41	.0000	.0000	.0000	.0002	-.0005	.0000	.0005	41
42	-.0355	.0125	.0000	-.2005	.0951	.0000	.2224	42
43	-.0781	.0148	.0000	-.5254	.1729	.0000	.5531	43
44	-.0782	.0105	.0000	-.5272	.0982	.0000	.5359	44
45	-.0788	.0035	.0000	-.4889	-.1802	.0000	.5301	45
46	-.0791	-.0048	.0006	-.4259	-.3353	.0000	.5811	46
47	-.0805	-.0005	.0000	-.3871	-.3819	.0000	.5370	47
48	-.0828	-.0283	.0000	-.3037	-.3287	.0000	.4478	48
49	-.0585	-.0574	.0000	-.1470	-.2443	.0000	.2855	49
50	-.0031	-.0318	.0000	-.0284	-.0517	.0000	.0595	50
51	.0005	-.0025	.0000	-.0120	-.0133	.0000	.0179	51
52	.0000	.0037	.0000	.0000	-.0083	.0000	.0084	52
53	-.0775	.0107	.0000	-.6761	.1555	.0000	.6934	53
54	-.0775	.0033	.0000	-.5900	-.1434	.0000	.6072	54
55	-.0786	-.0080	.0000	-.3792	-.3887	.0000	.5289	55
56	-.0784	-.0008	.0000	-.3035	-.4178	.0000	.5179	56
57	-.0858	-.0271	.0000	-.2350	-.3564	.0000	.4265	57
58	-.0488	-.1055	.0000	-.1035	-.2849	.0000	.3075	58
59	-.0081	-.0382	.0000	.0387	-.1045	.0000	.1108	59
60	-.0029	-.0018	.0000	-.0043	-.0095	.0000	.0105	60

61	.0000	.0035	.0000	.0000	-.0050	.0000	.0050	61
62	-.0783	.0034	.0000	-.1794	-.0083	.0000	.1795	62
63	-.0853	-.0071	.0000	-.1862	-.1833	.0000	.2489	63
64	-.0844	.0002	.0000	-.1789	-.2172	.0000	.2821	64
65	-.0819	.0027	.0000	-.1707	-.2218	.0000	.2799	65
66	-.0129	-.2826	.0000	-.0888	-.3875	.0000	.4033	66
67	-.0138	-.0442	.0000	-.0384	-.1389	.0000	.1438	67
68	-.0078	-.0009	.0000	-.0095	-.0071	.0000	.0119	68
69	.0000	.0027	.0000	.0000	-.0038	.0000	.0038	69
70	-.0844	-.0002	.0000	-.1818	-.0488	.0000	.1880	70
71	-.0848	-.0362	.0000	-.1730	-.1131	.0000	.2067	71
72	-.0884	-.0013	.0000	-.1743	-.1624	.0000	.2383	72
73	-.0641	-.0940	.0000	-.1415	-.1774	.0000	.2269	73
74	-.0482	-.2841	.0000	-.1108	-.3785	.0000	.3943	74
75	-.0350	-.0448	.0000	-.0818	-.1512	.0000	.1632	75
76	-.0089	-.0015	.0000	-.0082	-.0088	.0000	.0107	76
77	.0000	.0029	.0000	.0000	-.0028	.0000	.0028	77
78	-.0839	-.0031	.0000	-.1380	-.0878	.0000	.1819	78
79	-.1020	.0002	.0000	-.1468	-.1028	.0000	.1791	79
80	-.5801	.0829	.0000	-.6280	-.0217	.0000	.6283	80
81	-.5789	-.5181	.0000	-.6278	-.5728	.0000	.8498	81
82	.3275	-.2586	.0000	.2868	-.3460	.0000	.4508	82
83	.5883	-.0573	.0000	.5877	-.0815	.0000	.5888	83
84	.0000	.1195	.0000	.0000	.1160	.0000	.1160	84
85	-.1487	.0032	.0000	-.1885	-.0275	.0000	.1088	85
86	-.5047	.0831	.0000	-.5229	.0813	.0000	.5284	86
87	-.6031	-.6204	.0000	-.5214	-.5490	.0000	.7571	87
88	.3279	-.8172	.0000	.2814	-.6707	.0000	.7273	88
89	1.3707	-.0890	.0000	1.3818	-.1102	.0000	1.3881	89
90	.0000	.3524	.0000	.0000	.3339	.0000	.3339	90
91	-.4285	.0587	.0000	-.4285	.0587	.0000	.4387	91
92	-.4282	-.5254	.0000	-.4252	-.6254	.0000	.8759	92
93	.3886	-.3850	.0000	.3898	-.9850	.0000	1.0521	93
94	1.3732	-.1257	.0000	1.3732	-.1257	.0000	1.3789	94
95	.0000	.6228	.0000	.0000	.6228	.0000	.6228	95

STRUCTURAL ELEMENTS - LINEAR ELASTIC

BAR ELEMENTS--INTERNAL MEMBER FORCES

ELEMENT NO.	AXIAL FORCE
INCREMENTAL VALUES	
1	-.0053
2	-.0022
3	.0019
4	-.0090
5	-.0189
6	.0812
7	.2079
8	.0133
9	-.0017
TOTAL VALUES	
1	-.0081
2	.1438
3	.2722
4	.4413
5	.4781
6	.5877
7	.4411

8	.0884
9	.0448

FOUR NODE SOLID ELEMENTS - MODULI AND STRAINS (STRAINS IN PERCENT)

ELE	ELAS MOD	BULK MOD	SHEAR MOD	POIS	EPS-X	EPS-Y	GAM-XY	EPS-1	EPS-3	GAMMAX	ELE
1	530 8	333.5	228 5	158	002	001	005	004	- 001	005	1
2	525.1	335.3	225.5	.164	.002	.010	.017	.018	-.003	.019	2
3	488.9	308.9	210.7	.160	.025	-.025	.065	.041	-.041	.082	3
4	.7	17.3	.2	.484	2.033	-.783	2.732	2.589	-1.319	3.908	4
5	.8	17.0	.2	.484	.880	.064	8.740	4.925	-3.861	8.786	5
6	.7	17.9	.2	.484	-.689	2.533	7.901	5.133	-3.469	8.602	6
7	.7	18.4	.2	.483	-1.852	3.825	4.288	4.451	-2.417	6.889	7
8	.8	18.7	.2	.484	-1.180	2.041	-.704	2.079	-1.218	3.297	8
9	448 2	334 6	182 6	227	- 001	133	020	133	- 002	135	9
10	488.2	380.8	188.8	.237	-.013	.204	.029	.205	-.014	.219	10
11	475.6	370.5	191.8	.241	-.007	.205	-.083	.213	-.015	.228	11
12	510.5	363.0	211.1	.209	.015	.095	-.049	.102	.008	.094	12
13	444 3	282.2	197 9	123	002	007	- 001	003	002	001	13
14	484.7	287.8	202.7	.122	.017	-.012	.032	.024	-.019	.043	14
15	2.0	14.2	.7	.478	1.916	-1.582	5.801	3.555	-3.219	6.774	15
16	1.7	15.5	.6	.481	3.720	-2.415	10.463	6.418	-5.513	11.932	16
17	7	18 4	2	483	1 283	089	11 140	6 292	-4 911	11.203	17
18	.8	17.0	.2	.484	-1.552	3.358	8.874	5.875	-4.111	9.986	18
19	.8	17.0	.2	.484	-2.700	4.455	8.878	6.501	-4.746	11.247	19
20	.7	18.2	.2	.484	-2.805	5.214	5.967	6.222	-3.813	9.635	20
21	8	17 1	2	484	-1 820	3 323	3 177	3.790	-2.087	5.878	21
22	403.6	332.6	160.3	.259	-.029	.318	.055	.321	-.031	.352	22
23	404.5	304.5	164.4	.230	-.009	.240	-.113	.253	-.021	.274	23
24	453.8	307.3	180.6	180	.030	.103	-.057	.113	.020	.093	24
25	406 8	228 6	187 0	093	- 001	000	002	001	- 001	002	25
26	.0	.1	.0	.485	1.019	-1.585	2.302	1.528	-2.264	3.832	26
27	.4	13.4	.1	.484	3.516	-2.887	4.827	4.326	-3.678	8.002	27
28	1.5	13.5	.5	.482	1.302	-1.052	2 785	1.949	-1.698	3.647	28
29	8 1	15 1	2.9	405	083	1 190	2 855	2 161	- 908	3.070	29
30	.6	14.6	.2	.484	-1.177	2.857	.606	2.880	-1.199	4.079	30
31	.6	15.6	.2	.484	-1.774	3.738	- 873	3.758	-1.794	5.553	31
32	.6	15.5	.2	.484	-2.217	4.075	-1.229	4.135	-2.276	6.411	32
33	7	17 7	2	484	-2 598	5 117	1 550	5 166	-2 687	8 853	33
34	.7	17.4	.2	.484	-.751	4.410	1 776	4.559	-.900	5.459	34
35	288.6	253.4	113.1	.277	-.110	.570	.458	.640	-.180	.821	35
36	344.6	218.9	148.9	157	-.080	.131	.167	.183	-.091	.254	36
37	11.9	386 6	4 0	495	216	166	17 369	8 886	-8 483	17.369	37
38	867.3	625.7	381.3	.137	-.606	2.046	19.666	10.666	-9.426	20.092	38
39	432.1	453.2	163.8	319	-1.848	3.993	10.350	7.084	-4.739	11.822	39
40	223.2	425.1	79.4	407	-1.535	5.375	2 285	5.581	-1.721	7.282	40
41	348 1	441 5	128 5	354	-1 547	5 585	-1 028	5 600	-1 583	7 163	41
42	204.1	422.7	72.1	.415	-1.858	4.558	-.941	4.593	-1.891	6.284	42
43	11.9	388.6	4.0	.493	-1.612	3.956	-3.772	4.543	-2.100	6.643	43
44	878.7	597.3	265.5	.278	.219	1.942	-2 183	2.413	-.302	2.765	44
45	1077 1	857 9	471 8	141	- 032	048	055	055	- 041	095	45
46	266.6	430.9	86.9	.386	-.058	.058	.063	.074	-.065	.136	46
47	.1	4.0	.0	.495	-.010	.152	714	437	-.295	.732	47
48	85.8	408.4	29.3	.484	-.214	.145	811	.409	-.478	.887	48
49	1	4 0	0	495	565	- 043	700	132	- 742	874	49
50	.1	4.0	.0	.495	-1.085	6.387	1 399	6 447	-1.150	7.597	50
51	.1	4.0	.0	.495	-.575	9.317	-2.236	9.441	-.700	10.141	51
52	636.6	554.9	249.8	.275	-.252	2.877	-.320	2.885	-.260	3.145	52
53	850.5	573 7	358.0	188	- 085	057	128	080	- 110	190	53
54	11.9	388.6	4.0	.495	.137	-.110	.662	472	-.444	916	54
55	11.9	388.6	4.0	.495	-.072	.084	1.465	.758	-.736	1.494	55
56	11.9	388 8	4 0	.495	-.543	.548	-.118	.551	-.546	1 097	56
57	11 9	388 6	4 0	495	- 833	709	4 589	2 359	-2 482	4 841	57
58	1482.8	845.2	661.7	.114	-.481	3.001	1 262	3.112	-.573	3.681	58
59	978.1	813.1	385.2	202	-.462	2.808	.089	2.807	-.482	3.289	59
60	605.9	484.1	188.3	.288	-.106	.104	-.089	.113	- 117	222	60
61	.1	4.0	.0	.495	.257	-.019	- 036	.256	- 021	.278	61

62	279.8	432.4	101.2	.383	.141	-.072	.327	.230	-.181	.390	62
63	.1	4.0	.0	.495	5.547	-4.878	24.855	13.812	-13.141	26.952	63
64	.1	4.0	.0	.495	-.180	6.316	57.916	32.208	-25.072	58.280	64
65	1	4.0	.0	.495	-5.826	24.494	7.532	24.053	-6.383	31.338	65
66	.1	4.0	.0	.495	-4.890	16.192	-69.244	41.913	-30.411	72.328	66
67	1	4.0	0	.495	6.186	-3.010	-51.417	27.704	-24.528	52.233	67
68	11.9	358.6	4.0	.495	.201	-.295	4.558	2.394	-2.488	4.883	68
69	.1	4.0	.0	.495	10.421	-.303	-3.661	10.728	-.610	11.338	69
70	99.6	410.0	34.1	.488	-.013	.114	.030	.118	-.016	.131	70
71	.1	4.0	0	.495	-10.824	19.288	-3.891	19.401	-10.737	30.138	71
72	.1	4.0	.0	.495	-11.116	21.554	-22.166	24.366	-14.528	39.496	72
73	.1	4.0	.0	.495	14.751	-6.272	-22.042	19.176	-12.687	31.873	73
74	.1	4.0	.0	.495	8.875	-.283	-9.942	11.067	-2.450	13.508	74
75	135.9	414.3	47.1	.443	-.031	.116	.047	.120	-.034	.154	75
76	.1	4.0	.0	.495	-10.162	16.634	-2.503	16.882	-10.216	26.908	76
77	.1	4.0	.0	.495	-12.760	20.226	-10.883	21.100	-13.663	34.763	77
78	.1	4.0	.0	.495	17.149	-11.880	-7.563	17.837	-12.106	29.805	78

FOUR NODE SOLID ELEMENTS - STRESSES

ELE	SIG-X	SIG-Y	TAU-XY	SIG-1	SIG-3	TAU-MAX	THETA	SIG1/SIG3	LEVEL	ELE
1	.251	.488	.011	.488	.250	.119	2.577	1.952	.078	1
2	.263	.539	.039	.545	.258	.144	7.832	2.114	.093	2
3	.365	.384	.149	.509	.211	.149	44.123	2.409	.102	3
4	.393	.561	.008	.561	.393	.084	1.865	1.430	1.888	4
5	.353	.529	.018	.531	.351	.090	5.997	1.511	1.798	5
6	.448	.642	.017	.644	.447	.098	4.954	1.441	1.998	6
7	.510	.713	.010	.714	.510	.102	2.708	1.400	2.039	7
8	.310	.503	-.001	.503	.310	.097	-.394	1.623	1.930	8
9	.332	1.035	.031	1.036	.331	.353	2.517	3.130	.211	9
10	.402	1.433	.053	1.436	.399	.518	2.937	3.597	.288	10
11	.440	1.455	-.162	1.481	.414	.533	-8.637	3.574	.283	11
12	.375	.881	-.104	.902	.355	.273	-11.171	2.541	.160	12
13	.146	.286	-.002	.286	.146	.070	-.722	1.955	.052	13
14	.206	.222	.085	.279	.149	.065	41.668	1.874	.048	14
15	.154	.207	.030	.221	.141	.040	24.414	1.571	.805	15
16	.248	.284	.043	.313	.219	.047	33.309	1.426	.933	16
17	.299	.385	.022	.390	.294	.048	13.833	1.328	.965	17
18	.350	.458	.018	.461	.347	.057	8.873	1.328	1.139	18
19	.344	.481	.017	.483	.341	.061	6.321	1.356	1.222	19
20	.493	.615	.014	.616	.491	.063	6.323	1.255	1.253	20
21	.339	.450	.007	.450	.339	.056	3.423	1.328	1.112	21
22	.386	1.841	.087	1.847	.380	.643	3.865	4.875	.374	22
23	.314	1.245	-.186	1.285	.277	.504	-10.854	4.632	.321	23
24	.310	.632	-.109	.665	.276	.194	-17.089	2.408	.124	24
25	.042	.081	.003	.082	.042	.025	4.006	2.182	.022	25
26	.009	-.004	.007	.012	-.007	.010	65.646	-1.682	-1.000	26
27	.165	.027	.048	.178	.014	.082	73.494	12.892	1.842	27
28	.108	.024	.012	.108	.022	.043	82.092	4.806	.854	28
29	.159	.187	.033	.209	.137	.036	33.761	1.519	.713	29
30	.176	.302	-.003	.302	.176	.063	-1.473	1.722	1.267	30
31	.228	.335	-.004	.338	.228	.054	-2.084	1.475	1.089	31
32	.206	.322	-.011	.323	.204	.059	-5.528	1.582	1.190	32
33	.488	.611	.002	.611	.488	.062	.905	1.254	1.237	33
34	.528	.627	.008	.627	.528	.051	3.180	1.193	1.017	34
35	.414	1.787	-.104	1.795	.406	.695	-4.321	4.423	.365	35
36	.085	.285	-.024	.289	.082	.104	-6.729	4.332	.087	36
37	.080	.087	-.053	.128	.019	.054	-37.895	6.720	2.128	37
38	.084	.102	.021	.119	.076	.021	39.283	1.561	.208	38
39	.083	.281	.071	.304	.061	.121	17.777	4.998	1.488	39
40	-.018	.270	-.124	.316	-.062	.189	-20.446	-5.065	-1.000	40
41	-.155	.326	.028	.328	-.156	.242	3.302	-2.099	-1.000	41
42	-.484	.779	.056	.781	-.487	.619	2.583	-1.711	-1.000	42
43	-.575	.085	-.121	.107	-.597	.352	-10.080	-.179	-1.000	43
44	.257	2.010	-.223	2.038	.229	.906	-7.143	8.913	2.941	44
45	-.119	.176	.224	.287	-.230	.268	28.275	-1.239	-1.000	45
46	.028	.028	.028	.056	-.002	.029	44.194	-31.105	-1.000	46
47	.014	.152	.107	.210	-.044	.127	28.913	-4.780	-1.000	47
48	-.048	.239	.108	.275	-.083	.179	18.580	-3.325	-1.000	48
49	-.049	.280	-.077	.297	-.067	.182	-12.493	-4.470	-1.000	49
50	.237	.410	-.043	.420	.228	.097	-13.230	1.856	.318	50
51	.276	.584	-.085	.611	.249	.181	-15.825	2.456	.541	51
52	-.021	1.470	-.309	1.531	-.083	.807	-11.284	-18.474	-1.000	52
53	-.540	.165	.410	.383	-.728	.541	24.646	-.465	-1.000	53
54	.128	.148	.129	.268	.007	.130	43.018	38.102	13.042	54
55	.068	.257	.059	.274	.052	.111	15.959	5.300	1.598	55
56	-.153	.261	-.001	.261	-.153	.207	-.194	-1.708	-1.000	56
57	-.624	-.309	.118	-.271	-.662	.195	16.168	.410	-1.000	57
58	-1.017	1.738	-1.840	2.559	-1.838	2.299	-26.596	-1.372	-1.000	58
59	-2.009	.396	1.780	1.341	-2.955	2.148	27.982	-.454	-1.000	59
60	-.384	.347	-.183	.392	-.408	.400	-13.623	-.961	-1.000	60
61	.010	.006	-.037	.046	-.029	.037	-46.447	-1.548	-1.000	61
62	.625	.115	.307	.689	-.048	.388	61.751	-14.888	-1.000	62
63	.124	.084	.142	.247	-.039	.143	46.989	-6.388	-1.000	63
64	.318	.442	-.091	.490	.269	.111	-27.855	1.823	.308	64
65	.745	.786	.003	.787	.745	.021	4.141	1.056	.021	65
66	.487	.501	-.028	.516	.452	.032	-29.318	1.143	.053	66
67	.247	.329	-.020	.333	.242	.046	-12.937	1.377	.140	67
68	-.349	-.378	.279	-.083	-.642	.280	46.406	.129	-1.000	68
69	.494	.456	.074	.565	.404	.075	50.317	1.372	.136	69
70	.350	.645	-.041	.653	.342	.106	-11.395	1.618	.230	70
71	.350	.391	-.001	.391	.350	.020	-2.080	1.117	.043	71
72	.420	.463	-.009	.465	.418	.023	-11.168	1.111	.041	72
73	.284	.283	-.009	.293	.275	.009	-47.205	1.064	.024	73
74	.355	.356	-.002	.358	.354	.002	-38.168	1.011	.004	74
75	.303	.459	.022	.462	.300	.081	7.969	1.539	.200	75
76	.343	.383	-.001	.383	.343	.020	-1.430	1.117	.043	76
77	.300	.344	-.004	.344	.300	.022	-6.663	1.147	.066	77
78	.247	.241	-.003	.248	.239	.004	-67.392	1.036	.013	78

```
SSTIPN. 1 LAYER OF GEOTEXTILE, P=1000 PPI, EXTENRED, T=1000

TOTAL NUMBER OF NODES------------------ 95
NUMBER OF BAR ELEMENTS----------------- 11
NUMBER OF DIFF. BAR MATERIALS----------  1
NUMBER OF BEAM ELEMENTS----------------  0
NUMBER OF DIFF. BEAM MATERIALS---------  0
NUMBEP OF NODAL LINKS -----------------  0
NUMBER OF INTERFACE ELEMENTS-----------  0
NO  OF INTERFACE ELE  IN PREEXIST  PART  0
NUMBER OF INTERFACE ELE. IN FOUNDATION-  0
NUMBER OF INTERFACE MATERIALS----------  0
TOTAL NUMBER OF SOIL ELEMENTS---------- 78
NUMBER OF DIFF  SOIL MATERIALS---------  3
NUMBER OF ELEMENTS IN FOUNDATION------- 38
NUMBER OF NODES IN FOUNDATION---------- 52
NUMBER OF PREEXISTING ELEMENTS---------  0
NUMBER OF PREEXISTING NODES------------  0
NUMBER OF CONSTRUCTION LAYERS----------  6
NUMBER OF LOAD CASES-------------------  2

CALING FACTOR ----------      1 00000

ATMOSPHERIC PRESSURE ---      1.05800

UNIT WEIGHT OF WATER ---        03120


OMPUTATION SEQUENCE FOR A TOTAL OF     8  INCREMENTS
----------------------------------------------------


 INCREMENT NO.  1      APPLY LOAD CASE   1

 INCREMENT NO.  2      PUT ON LAYER NO.  1

 INCREMENT NO.  3      PUT ON LAYER NO.  2

 INCREMENT NO.  4      PUT ON LAYER NO.  3

 INCREMENT NO.  5      PUT ON LAYER NO.  4

 INCREMENT NO.  6      PUT ON LAYER NO.  5

 INCREMENT NO   7      PUT ON LAYER NO   6

 INCREMENT NO.  8      APPLY LOAD CASE   2
```

NODAL POINT INPUT DATA

NODE NUMBER	NODAL POINT COORDINATES X-ORD	Y-ORD	B.C. CODE X	Y	ZZ
1	.000	.000	1	1	1
2	10.000	.000	1	1	1
3	20.000	.000	1	1	1
4	30.000	.000	1	1	1
5	35.000	.000	1	1	1
6	42.000	.000	1	1	1
7	50.000	.000	1	1	1
8	54.000	.000	1	1	1
9	58.000	.000	1	1	1
10	66.000	.000	1	1	1
11	74.000	.000	1	1	1
12	82.000	.000	1	1	1
13	90.000	.000	1	1	1
14	.000	4.000	1	0	1
15	10.000	4.000	0	0	0
16	20.000	4.000	0	0	0
17	30.000	4.000	0	0	0
18	35.000	4.000	0	0	0
19	42.000	4.000	0	0	0
20	50.000	4.000	0	0	0
21	54.000	4.000	0	0	0
22	58.000	4.000	0	0	0
23	66.000	4.000	0	0	0
24	74.000	4.000	0	0	0
25	82.000	4.000	0	0	0
26	90.000	4.000	1	0	1
27	.000	7.000	1	0	1
28	10.000	7.000	0	0	0
29	20.000	7.000	0	0	0
30	30.000	7.000	0	0	0
31	35.000	7.000	0	0	0
32	42.000	7.000	0	0	0
33	50.000	7.000	0	0	0
34	54.000	7.000	0	0	0
35	58.000	7.000	0	0	0
36	66.000	7.000	0	0	0
37	74.000	7.000	0	0	0
38	82.000	7.000	0	0	0
39	90.000	7.000	1	0	1
40	.000	10.000	1	0	1
41	10.000	10.000	0	0	0
42	20.000	10.000	0	0	0
43	30.000	10.000	0	0	0
44	35.000	10.000	0	0	0
45	42.000	10.000	0	0	0
46	50.000	10.000	0	0	0
47	54.000	10.000	0	0	0
48	58.000	10.000	0	0	0
49	66.000	10.000	0	0	0
50	74.000	10.000	0	0	0
51	82.000	10.000	0	0	0
52	90.000	10.000	1	0	1
53	35.000	11.500	0	0	0
54	42.000	11.500	0	0	0
55	50.000	11.500	0	0	0
56	54.000	11.500	0	0	0
57	58.000	11.500	0	0	0
58	66.000	11.500	0	0	0
59	74.000	11.500	0	0	0
60	82.000	11.500	0	0	0
61	90.000	11.500	1	0	1
62	42.000	13.000	0	0	0
63	50.000	13.000	0	0	0
64	54.000	13.000	0	0	0
65	58.000	13.000	0	0	0
66	66.000	13.000	0	0	0
67	74.000	13.000	0	0	0
68	82.000	13.000	0	0	0
69	90.000	13.000	1	0	1
70	46.000	14.000	0	0	0
71	50.000	14.000	0	0	0
72	54.000	14.000	0	0	0
73	58.000	14.000	0	0	0
74	66.000	14.000	0	0	0
75	74.000	14.000	0	0	0
76	82.000	14.000	0	0	0
77	90.000	14.000	1	0	1
78	50.000	15.000	0	0	0
79	54.000	15.000	0	0	0
80	58.000	15.000	0	0	0
81	66.000	15.000	0	0	0
82	74.000	15.000	0	0	0
83	82.000	15.000	0	0	0
84	90.000	15.000	1	0	1
85	54.000	16.000	0	0	0
86	58.000	16.000	0	0	0
87	66.000	16.000	0	0	0
88	74.000	16.000	0	0	0
89	82.000	16.000	0	0	0
90	90.000	16.000	1	0	1
91	58.000	17.000	0	0	0
92	66.000	17.000	0	0	0
93	74.000	17.000	0	0	0
94	82.000	17.000	0	0	0
95	90.000	17.000	1	0	1

BAR ELEMENTS-------

MATERIAL NUMBER	E	AREA	WEIGHT/LENGTH
1	30.	1.00	0.

ELMT NO.	CONNECTED NODES I	CONNECTED NODES J	MATL NO.
1	41	42	1
2	42	43	1
3	43	44	1
4	44	45	1
5	45	46	1
6	46	47	1
7	47	48	1
8	48	49	1
9	49	50	1
10	50	51	1
11	51	52	1

SOIL MATERIAL PROPERTY DATA

MATL	UNIT WT	YOUNG'S MODULUS CONSTANT	YOUNG'S MODULUS EXPONENT	RATIO	BULK MODULUS CONSTANT	BULK MODULUS EXPONENT	STRENGTH PARAMETERS C	PHI	DPHI	KO
1	.0550	5000.00	.500	.300	1500.00	.500	.00	35.00	.00	.50
2	.0530	40.00	.300	.900	20.00	.200	.05	.00	.00	.50
3	.0600	1000.00	.400	.700	500.00	.500	.50	40.00	.00	.50

FOUR NODES SOLID ELEMENT DATA

ELET NO.	CONNECTED NODES I	J	K	L	MATL NO.	ELEMENT CENTER COORDINATES X-ORD	Y-ORD
1	1	2	15	14	3	5.000	2.000
2	2	3	16	15	3	15.000	2.000
3	3	4	17	16	3	25.000	2.000
4	4	5	18	17	2	33.000	2.000
5	5	6	19	18	2	39.000	2.000
6	6	7	20	19	2	46.000	2.000
7	7	8	21	20	2	52.000	2.000
8	8	9	22	21	2	58.000	2.000
9	9	10	23	22	3	62.000	2.000
10	10	11	24	23	3	70.000	2.000
11	11	12	25	24	3	78.000	2.000
12	12	13	26	25	3	86.000	2.000
13	14	15	28	27	3	5.000	5.500
14	15	16	29	28	3	15.000	5.500
15	16	17	30	29	2	25.000	5.500
16	17	18	31	30	2	33.000	5.500
17	18	19	32	31	2	39.000	5.500
18	19	20	33	32	2	46.000	5.500
19	20	21	34	33	2	52.000	5.500
20	21	22	35	34	2	58.000	5.500
21	22	23	36	35	2	62.000	5.500
22	23	24	37	36	3	70.000	5.500
23	24	25	38	37	3	78.000	5.500
24	25	26	39	38	3	86.000	5.500
25	27	28	41	40	3	5.000	8.500
26	28	29	42	41	2	15.000	8.500
27	29	30	43	42	2	25.000	8.500
28	30	31	44	43	2	33.000	8.500
29	31	32	45	44	2	39.000	8.500
30	32	33	46	45	2	46.000	8.500
31	33	34	47	46	2	52.000	8.500
32	34	35	48	47	2	58.000	8.500
33	35	36	49	48	2	62.000	8.500
34	36	37	50	49	2	70.000	8.500
35	37	38	51	50	3	78.000	8.500
36	38	39	52	51	3	86.000	8.500
37	43	44	53	53	1	36.500	10.750
38	44	45	54	53	1	39.000	10.750
39	45	46	55	54	1	46.000	10.750
40	46	47	56	55	1	52.000	10.750
41	47	48	57	56	1	58.000	10.750
42	48	49	58	57	1	62.000	10.750
43	49	50	59	58	1	70.000	10.750
44	50	51	60	59	1	78.000	10.750
45	51	52	61	60	1	86.000	10.750
46	53	54	62	62	1	40.500	12.250
47	54	55	63	62	1	46.000	12.250
48	55	56	64	63	1	52.000	12.250
49	56	57	65	64	1	58.000	12.250
50	57	58	66	65	1	62.000	12.250
51	58	59	67	66	1	70.000	12.250
52	59	60	68	67	1	78.000	12.250
53	60	61	69	68	1	86.000	12.250
54	62	63	71	70	1	47.000	13.500
55	63	64	72	71	1	52.000	13.500
56	64	65	73	72	1	58.000	13.500
57	65	66	74	73	1	62.000	13.500
58	66	67	75	74	1	70.000	13.500
59	67	68	76	75	1	78.000	13.500
60	68	69	77	76	1	86.000	13.500
61	70	71	78	78	1	49.000	14.500
62	71	72	79	78	1	52.000	14.500
63	72	73	80	79	1	58.000	14.500
64	73	74	81	80	1	62.000	14.500
65	74	75	82	81	1	70.000	14.500
66	75	76	83	82	1	78.000	14.500
67	76	77	84	83	1	86.000	14.500
68	78	79	86	85	1	53.000	15.500
69	79	80	86	85	1	58.000	15.500
70	80	81	87	86	1	62.000	15.500
71	81	82	88	87	1	70.000	15.500
72	82	83	89	88	1	78.000	15.500
73	82	84	90	89	1	86.000	15.500
74	85	86	91	91	1	57.000	16.500
75	86	87	92	91	1	62.000	16.500
76	87	88	93	92	1	70.000	16.500
77	88	89	94	93	1	78.000	16.500
78	89	90	95	94	1	86.000	16.500

SSTIPN 1 LAYER OF GEOTEXTILE, P=1000 PPI, EXTENDED, T=1000

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*******************************************************
*******************************************************
*                                                     *
*  LOAD CASE ------------------------------    2      *
*                                                     *
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LARGEST ELE. NO. IN THIS INCREMENT 78

LARGEST N P NO IN THIS INCREMENT 95

BAND WIDTH----------------------- 40

TOTAL NUMBER OF EQUATIONS--------- 222

NUMBER OF EQUATIONS IN BLOCK------ 84

NUMBER OF BLOCKS----------------- 3

NUMBER OF N.P. FORCE CARDS--------- 3

NUMBER OF PRESSURE CARDS---------- 0

NODAL POINT FORCES (WEIGHTS OF ADDED ELEMENTS)

NP	X-FORCE	Y-FORCE
1	0.	0.
2	0	0
3	0.	0.
4	0.	0.
5	0.	0.
6	0	0
7	0.	0.
8	0.	0.
9	0.	0.
10	0	0
11	0	0.
12	0.	0.
13	0.	0.
14	0	0
15	0.	0.
16	0.	0.
17	0.	0.
18	0	0
19	0.	0.
20	0.	0.
21	0	0.
22	0	0
23	0	0.
24	0.	0.
25	0.	0.
26	0	0
27	0.	0.
28	0.	0.
29	0.	0.
30	0	0
31	0.	0.
32	0.	0.
33	0.	0.
34	0	0
35	0.	0.
36	0.	0.
37	0.	0.
38	0	0.
39	0.	0.
40	0.	0.
41	0.	0.
42	0	0
43	0.	0.
44	0	0.
45	0.	0.
46	0.	0
47	0.	0.
48	0.	0.
49	0.	0.
50	0	0
51	0.	0.
52	0.	0.
53	0.	0.
54	0	0
55	0.	0.
56	0.	0.
57	0	0.
58	0	0
59	0.	0.
60	0	0.
61	0.	0.
62	0.	0.

64	0.	0.
65	0.	0.
66	0.	0.
67	0.	0.
68	0.	0.
69	0.	0
70	0.	0
71	0.	0
72	0.	0
73	0.	0
74	0.	0.
75	0.	0.
76	0	0.
77	0.	0.
78	0.	0.
79	0.	0.
80	0.	0.
81	0.	0.
82	0.	0.
83	0.	0.
84	0.	0.
85	0.	0.
86	0.	0.
87	0.	0.
88	0	0
89	0.	0.
90	0.	0.
91	0.	0.
92	0.	-4 50
93	0.	-4.50
94	0.	-2.00
95	0.	0.

LOAD CASE : 2 ITERATION : 2

NP	DELTA-X	DELTA-Y	DELTA-ZZ	X-DISP	Y-DISP	ZZ-ROTAT	TOTAL	NP
1	.0000	.0000	.0000	.0000	.0000	.0000	.0000	1
2	.0000	.0000	.0000	.0000	.0000	.0000	.0000	2
3	.0000	.0000	.0000	.0000	.0000	.0000	.0000	3
4	.0000	.0000	.0000	.0000	.0000	0000	0000	4
5	.0000	.0000	.0000	.0000	.0000	.0000	.0000	5
6	.0000	.0000	.0000	.0000	.0000	.0000	.0000	6
7	.0000	.0000	.0000	.0000	.0000	.0000	.0000	7
8	.0000	.0000	.0000	.0000	.0000	.0000	.0000	8
9	.0000	.0000	.0000	.0000	.0000	.0000	.0000	9
10	.0000	.0000	.0000	.0000	.0000	.0000	.0000	10
11	.0000	.0000	.0000	.0000	.0000	.0000	.0000	11
12	.0C00	.0000	.0000	.0000	.0000	0000	0000	12
13	.0000	.0000	.0000	.0000	0000	.0000	.0000	13
14	.0000	-.0001	.0000	.0000	-.0008	.0000	.0C08	14
15	.0000	.0000	.0000	-.0008	.0002	.0000	.0008	15
16	.0000	.0000	.0000	-.0006	- 0004	0000	.0007	16
17	-.0005	.0002	.0000	-.0051	.0023	.0000	.0056	17
18	-.0135	.0022	.0000	-.2080	.0358	.0000	.2121	18
19	-.0171	-.0039	.0000	-.2930	-.0742	.0000	.3022	19
20	-.0089	-.0051	.0000	-.1874	- 1278	0000	.2108	20
21	-.0061	-.0034	.0000	-.0630	-.1380	.0000	.1526	21
22	.0003	.0010	.0000	.0005	-.0037	.0000	.0038	22
23	-.0013	- 0028	.0000	-.0006	- 0080	.0000	.0081	23
24	.0009	- 0057	0000	.0015	- 0108	.0000	0108	24
25	.0021	- 0020	.0000	.0024	- 0054	.0000	.0059	25
26	.0000	.0008	.0000	.0000	-.0028	.0000	.0028	26
27	.0000	-.0001	.0000	.0000	- 0010	.0000	.0010	27
28	- 0001	0001	.0000	-.0014	.0002	0000	001C	28
29	-.0001	.0000	.0000	-.0018	.0003	.0000	.0018	29
30	-.0183	0048	.0000	-.2107	.0839	.0000	2201	30
31	-.0302	.0048	.0000	-.3199	.0708	.0000	3277	31
32	-.0377	-.0052	.0000	-.3889	-.1297	0000	4071	32
33	-.0480	-.0081	.0000	-.3188	-.2849	.0000	4087	33
34	-.0585	0040	.0000	-.2844	-.2359	.0000	.3843	34
35	-.0741	-.0092	.0000	-.1893	- 1881	.0000	2844	35
36	-.0030	-.0074	.0000	-.0014	-.0187	0000	0188	36
37	.0019	-.0113	.0000	.0027	- 0194	.0000	0186	37
38	.0025	-.0038	.0000	.0024	- 0103	.0000	0108	38
39	.0000	.0C19	0000	.0000	-.0042	.0000	0042	39
40	.0000	-.0002	.0000	.0000	- 0015	0000	0015	40
41	-.0008	.0002	.0000	-.0081	0010	.0000	.0082	41
42	-.0287	.0055	.0000	-.1019	0207	.0000	1040	42
43	-.0868	.0107	.0000	-.2738	1078	.0000	.2941	43
44	-.0590	0041	.0000	-.3011	0872	.0000	3085	44
45	-.0604	-.0080	.0000	-.3087	- 1768	.0000	.3540	45
46	-.0591	- 0088	.0000	-.2884	- 3521	.0000	.4427	46
47	-.0583	.0058	0000	-.2274	-.3287	.0000	.3997	47
48	-.0584	.0129	0000	-.1886	- 2462	0000	3089	48
49	-.0404	-.1110	.0000	-.0787	-.2838	.0000	.2867	49
50	-.0003	-.0278	.0000	-.0032	-.0457	0000	.0458	50
51	.0000	-.0030	.0000	- 0012	-.0118	0000	0118	51
52	.0000	.0028	.0000	.0000	- 0073	.0000	.0073	52
53	-.0870	.0044	.0000	-.5587	.1080	.0000	.5686	53
54	-.0581	-.0058	.0000	-.4880	-.1508	.0000	.5087	54
55	-.0814	-.0101	.0000	-.2837	-.3241	.0000	.4374	55
56	-.0818	.0055	.0000	-.2353	- 3480	0000	4208	56
57	-.0813	0108	.0000	- 1781	-.2718	.0000	.3231	57
58	-.0079	- 1177	.0000	-.0801	-.2925	.0000	.2988	58
59	-.0047	- 0318	.0000	.0432	-.0987	.0000	.1059	59
60	-.0029	-.0027	.0000	-.0040	-.0105	.0000	.0112	60

61	.0000	.0027	.0000	.0000	-.0057	.0000	.0057	61
62	-.0880	-.0055	.0000	-.1252	-.0202	.0000	.1268	62
63	-.0718	-.0087	.0000	-.1389	-.1470	.0000	.2023	63
64	-.0759	.0052	.0000	-.1435	-.1712	.0000	.2234	64
65	-.0888	.0123	.0000	-.1521	-.1719	.0000	.2295	65
66	-.0224	-.1201	.0000	-.0884	-.2204	.0000	.2307	66
67	-.0150	-.0338	.0000	-.0339	-.1274	.0000	.1318	67
68	-.0059	-.0030	.0000	-.0075	-.0092	.0000	.0119	68
69	.0000	.0027	.0000	.0000	-.0037	.0000	.0037	69
70	-.0781	-.0044	.0000	-.1283	- 0473	.0000	.1388	70
71	-.0883	- 0082	.0000	-.1520	-.0850	.0000	.1783	71
72	-.1186	.0074	.0000	-.1743	- 1133	0000	2079	72
73	-.1298	.0155	.0000	-.1848	-.1176	0000	.2190	73
74	-.0343	- 1209	.0000	-.0839	-.2002	0000	.2171	74
75	-.0229	-.0743	.0000	-.0449	-.1390	.0000	.1481	75
76	-.0077	-.0036	.0000	-.0092	-.0087	.0000	.0127	76
77	.0000	.0024	.0000	.0000	-.0025	.0000	.0025	77
78	-.1207	-.0010	.0000	-.1501	-.0523	.0000	1589	78
79	-.1281	.0071	.0000	-.1683	-.0648	.0000	.1802	79
80	-.1336	0197	.0000	-.1663	-.0630	.0000	.1778	80
81	-.2885	- 3206	.0000	-.3194	-.3732	.0000	.4912	81
82	.7202	-.2491	.0000	.6839	- 3373	0000	7626	82
83	1.1167	- 0409	.0000	1.1183	-.0449	.0000	1.1182	83
84	.0000	.1206	.0000	.0000	1171	.0000	.1171	84
85	-.1302	.0072	.0000	-.1402	-.0121	.0000	.1407	85
86	-.1406	.0239	.0000	-.1518	- 0009	.0000	1518	86
87	-.1419	- 5415	.0000	-.1534	-.5587	.0000	.5671	87
88	8511	-.5435	.0000	.8081	- 5959	.0000	1.0040	88
89	1.5705	-.0510	.0000	1.5619	-.0721	.0000	1.5635	89
90	.0000	.3716	.0000	.0000	.3832	.0000	3832	90
91	-.0703	.0259	.0000	-.0703	.0259	.0000	.0749	91
92	-.0704	-.5452	.0000	-.0704	-.5452	.0000	.5497	92
93	.7390	-.9087	.0000	7390	-.9087	.0000	1.1713	93
94	1.6411	- 0538	.0000	1.6411	-.0538	.0000	1 6420	94
95	.0000	5580	.0000	.0000	.5580	.0000	.5580	95

STRUCTURAL ELEMENTS - LINEAR ELASTIC

BAR ELEMENTS--INTERNAL MEMBER FORCES

ELEMENT NO.	AXIAL FORCE
INCREMENTAL VALUES	
1	-.0752
2	-.0637
3	-.0103
4	-.0072
5	.0048
6	.0289
7	-.0231
8	.0872
9	.1504
10	.0012
11	.0001
TOTAL VALUES	
1	-.2904
2	-.5158
3	-.1369
4	-.0276
5	.1434
6	.3078
7	.3058
8	.4047
9	.2830
10	.0076
11	.0044

FOUR NODE SOLID ELEMENTS - MODULI AND STRAINS (STRAINS IN PERCENT)

ELE	ELAS MOD	BULK MOD	SHEAR MOD	POIS	EPS-X	EPS-Y	GAM-XY	EPS-1	EPS-3	GAMMAX	ELE
1	538.1	340.4	232.1	.159	.003	.005	.004	.008	.002	.004	1
2	511.1	323.5	220.4	.159	.000	.003	.018	.010	-.008	.018	2
3	505.1	318.3	218.3	.157	.023	-.023	.058	.037	-.037	.074	3
4	.7	17.2	.2	.494	1.899	-.475	2.398	2.231	-1.007	3.237	4
5	.8	17.1	.2	.494	.700	.480	7.192	4.187	-3.008	7.195	5
6	.7	17.9	.2	.494	-.785	2.525	6.050	4.326	-2.596	6.931	6
7	.7	18.4	.2	.493	-1.305	3.335	3.019	3.783	-1.753	5.538	7
8	.8	18.9	.2	.494	-.794	1.784	-.910	1.862	-.872	2.734	8
9	483.3	340.9	189.6	.222	.007	.122	.014	.123	.006	.116	9
10	485.4	360.9	189.2	.238	-.013	.207	.016	.207	-.013	.221	10
11	475.3	371.0	191.3	.242	-.005	.199	-.081	.207	-.013	.220	11
12	513.8	365.6	212.4	.209	.015	.100	-.047	.106	.009	.098	12
13	485.9	294.6	220.1	.126	.010	.006	.004	.011	.005	.006	13
14	385.7	224.9	172.9	.116	.002	-.013	.037	.014	-.026	.040	14
15	2.0	13.6	.7	.475	1.087	-1.040	3.115	1.894	-1.887	3.780	15
16	4.0	16.2	1.4	.457	2.910	-1.612	4.936	3.746	-2.749	6.495	16
17	1.5	16.9	.5	.485	1.249	.340	5.982	3.820	-2.231	6.051	17
18	.8	17.1	.2	.494	-1.224	3.043	5.136	4.248	-2.430	6.677	18
19	.8	17.1	.2	.494	-1.945	3.733	5.730	4.927	-3.139	8.087	19
20	.7	18.2	.2	.494	-1.806	4.189	4.024	4.819	-2.238	7.056	20
21	.6	17.1	.2	.494	-1.230	2.751	2.474	3.104	-1.583	4.688	21
22	402.9	331.9	160.0	.259	-.038	.328	.040	.327	-.039	.366	22
23	394.8	305.7	164.4	.231	-.004	.230	-.108	.242	-.016	.258	23
24	484.2	314.5	195.1	.190	.030	.109	-.058	.118	.021	.098	24
25	380.1	223.8	169.5	.121	.033	-.005	.042	.042	-.015	.056	25
26	.4	13.4	.1	.485	.486	-.353	1.629	.982	-.850	1.333	26
27	.0	.1	.0	.495	1.904	-1.087	1.968	2.200	-1.384	3.584	27
28	1.3	13.5	.4	.484	1.139	-.866	1.017	1.272	-.800	2.072	28
29	.8	14.4	.3	.491	.398	.847	2.071	1.765	-.322	2.088	29
30	1.1	16.2	.4	.488	-.676	2.406	-.228	2.410	-.683	3.092	30
31	.6	15.7	.2	.494	-1.153	3.166	-1.933	3.372	-1.359	4.732	31
32	.6	15.5	.2	.494	-1.324	3.015	-2.831	3.436	-1.745	5.180	32
33	.7	17.7	.2	.494	-1.911	5.420	.241	5.422	-1.913	7.335	33
34	.7	17.4	.2	.494	-.497	4.380	.102	4.381	-.497	4.888	34
35	294.7	258.5	115.4	.277	-.011	.482	-.111	.488	-.018	.486	35
36	349.0	217.8	151.4	.152	.008	.075	-.007	.075	.007	.068	36
37	288.2	433.6	104.9	.378	.457	-.107	18.657	9.508	-9.158	18.665	37
38	332.0	439.3	122.0	.361	-.565	1.794	19.936	10.656	-9.418	20.074	38
39	481.9	460.5	185.6	.289	-1.384	3.789	10.227	6.933	-4.528	11.460	39
40	397.7	448.3	149.1	.334	-1.224	4.784	2.289	4.995	-1.435	6.430	40
41	394.9	447.9	147.9	.335	-1.237	5.112	-1.082	5.156	-1.281	6.437	41
42	157.6	416.9	54.9	.434	-1.416	4.136	-.504	4.147	-1.427	5.574	42
43	11.9	398.6	4.0	.495	-1.030	3.886	-4.787	4.671	-2.035	6.705	43
44	724.4	546.1	282.8	.281	.284	1.828	-2.188	2.395	-.283	2.679	44
45	1369.5	753.1	634.9	.078	-.033	.055	.038	.059	-.036	.096	45
46	11.9	398.6	4.0	.495	-.040	.014	.016	.016	-.041	.057	46
47	.1	4.0	.0	.495	.082	.023	.769	.438	-.333	.771	47
48	143.3	415.2	49.7	.440	.021	.055	.503	.290	-.214	.505	48
49	11.9	398.6	4.0	.495	-.298	.689	1.304	1.022	-.618	1.640	49
50	.1	4.0	.0	.495	-1.007	.505	3.357	1.881	-1.983	3.864	50
51	524.9	487.0	205.0	.281	-.327	2.980	.281	2.986	-.333	3.298	51
52	740.5	681.8	288.6	.282	-.226	2.765	-.191	2.768	-.228	2.996	52
53	937.8	585.4	406.8	.152	-.073	.089	.053	.074	-.077	.151	53
54	.1	4.0	.0	.495	.306	-.327	2.221	1.143	-1.165	2.308	54
55	11.9	398.6	4.0	.495	.310	-.261	3.607	1.851	-1.801	3.652	55
56	11.9	398.6	4.0	.495	.219	-.221	4.433	2.227	-2.228	4.455	56
57	.1	4.0	.0	.495	-1.157	.083	4.657	1.860	-2.953	4.814	57
58	1604.3	880.7	744.6	.077	-.416	2.871	1.187	2.975	-.522	3.497	58
59	1263.2	759.8	557.4	.133	-.352	2.753	-.348	2.763	-.361	3.124	59
60	491.3	461.9	189.8	.295	-.102	.094	.027	.095	-.103	.198	60
61	.1	4.0	.0	.495	.578	-.528	2.474	1.380	-1.330	2.710	61
62	.1	4.0	.0	.495	.344	-.238	1.207	.723	-.617	1.340	62
63	261.7	430.0	94.1	.391	.228	-.171	.316	.283	-.226	.509	63
64	.1	4.0	.0	.495	.326	9.828	15.698	14.251	-4.097	18.348	64
65	.1	4.0	.0	.495	-6.444	23.410	-23.848	27.586	-10.622	38.209	65
66	.1	4.0	.0	.495	-2.850	15.289	-94.312	54.240	-41.801	95.040	66
67	.1	4.0	.0	.495	6.914	-3.990	-57.285	30.609	-27.835	58.294	67
68	.1	4.0	.0	.495	.138	-.012	.221	.187	-.071	.258	68
69	212.9	423.8	75.4	.411	.234	-.219	.213	.258	-.243	.501	69
70	.1	4.0	.0	.495	.958	10.837	-1.178	10.872	.923	9.949	70
71	.1	4.0	.0	.495	-12.207	26.837	-13.081	27.900	-13.271	41.171	71
72	.1	4.0	.0	.495	-7.343	17.239	-32.714	25.408	-15.512	40.920	72
73	.1	4.0	.0	.495	16.738	-10.286	-25.987	21.966	-15.496	37.461	73
74	.1	4.0	.0	.495	.280	-.193	-7.461	3.766	-3.899	7.465	74
75	338.1	439.8	123.6	.359	.009	.080	.016	.091	.008	.082	75
76	.1	4.0	.0	.495	-11.265	16.443	4.321	16.599	-11.421	30.020	76
77	.1	4.0	.0	.495	-10.135	18.299	-6.344	18.747	-10.483	29.230	77
78	.1	4.0	.0	.495	20.073	-14.675	-10.682	20.875	-15.477	36.353	78

FOUR NODE SOLID ELEMENTS - STRESSES

ELE	SIG-X	SIG-Y	TAU-XY	SIG-1	SIG-3	TAU-MAX	THETA	SIG1/SIG3	LEVEL	ELE
1	.263	.514	.008	.514	.263	.126	1.925	1.958	.081	1
2	.242	.497	.040	.503	.239	.133	8.641	2.131	.089	2
3	.348	.372	.134	.494	.224	.135	42.256	2.208	.092	3
4	.383	.554	.005	.554	.383	.086	1.921	1.447	1.713	4
5	.371	.550	.015	.551	.370	.091	4.865	1.489	1.812	5
6	.462	.656	.013	.656	.461	.098	3.852	1.424	1.965	6
7	.512	.712	.007	.712	.511	.100	1.924	1.392	2.003	7
8	.333	.523	-.002	.523	.333	.095	-.528	1.572	1.905	8
9	.360	.997	.023	.998	.359	.319	2.037	2.775	.186	9
10	.406	1.447	.028	1.448	.405	.522	1.552	3.578	.290	10
11	.440	1.429	-.156	1.454	.415	.519	-8.665	3.499	.285	11
12	.381	.910	-.100	.928	.362	.283	-10.368	2.560	.164	12
13	.189	.306	.008	.306	.188	.059	3.805	1.630	.042	13
14	.134	.215	.087	.253	.096	.078	28.483	2.629	.063	14
15	.103	.174	.013	.177	.100	.038	10.170	1.761	.784	15
16	.276	.288	.038	.321	.243	.039	40.401	1.318	.774	16
17	.334	.417	.017	.420	.331	.045	11.180	1.270	.894	17
18	.382	.488	.010	.489	.381	.054	5.507	1.301	1.087	18
19	.352	.484	.012	.485	.351	.067	5.500	1.328	1.142	19
20	.492	.606	.009	.606	.491	.056	4.727	1.235	1.163	20
21	.310	.417	.005	.417	.310	.054	2.759	1.345	1.071	21
22	.336	1.668	.060	1.670	.333	.668	2.579	5.009	.400	22
23	.323	1.211	-.179	1.246	.288	.479	-10.977	4.325	.301	23
24	.319	.865	-.109	.897	.287	.205	-16.105	2.425	.129	24
25	.176	.083	.076	.218	.040	.089	60.761	5.408	.078	25
26	.031	.007	.023	.045	-.007	.026	53.909	-6.097	-1.000	26
27	.059	.000	-.001	.059	.000	.029	-88.855	-4350.167	-1.000	27
28	.117	.034	.000	.117	.034	.042	-89.960	3.472	.834	28
29	.182	.253	.006	.254	.181	.046	3.926	1.570	.920	29
30	.199	.288	-.002	.288	.199	.044	-1.319	1.445	.865	30
31	.235	.351	-.005	.351	.235	.058	-2.933	1.496	1.186	31
32	.191	.290	-.013	.291	.190	.051	-7.213	1.534	1.014	32
33	.494	.608	.002	.608	.494	.057	.791	1.231	1.139	33
34	.589	.689	.000	.689	.589	.050	.016	1.175	1.000	34
35	.473	1.709	-.126	1.722	.460	.631	-5.635	3.747	.332	35
36	.067	.304	-.009	.304	.067	.119	-2.072	4.544	.091	36
37	.377	.176	-.196	.496	.056	.220	-58.619	8.800	2.899	37
38	.191	.064	.068	.220	.025	.098	67.351	8.770	2.886	38
39	.182	.320	.173	.431	.051	.190	32.667	8.465	2.775	39
40	-.202	.227	-.121	.259	-.234	.246	-14.763	-1.107	-1.000	40
41	-.257	.528	-.338	.654	-.382	.518	-20.263	-1.710	-1.000	41
42	-.784	.333	.119	.346	-.797	.571	5.997	-.433	-1.000	42

43	.214	.798	-.177	.847	.185	.341	-15.584	5.140	1.539	43
44	.383	1.507	-.118	1.519	.370	.575	-5.937	4.104	1.154	44
45	-.170	.287	.181	.385	-.238	.302	19.687	-1.535	-1.000	45
46	.000	.024	.011	.028	-.005	.017	21.422	-5.760	-1.000	46
47	.057	.141	.110	.217	-.019	.118	34.469	-11.338	-1.000	47
48	.254	.457	.287	.541	.071	.285	34.574	9.085	3.005	48
49	-.133	.114	-.012	.115	-.134	.124	-2.772	-.859	-1.000	49
50	-.005	.256	-.070	.273	-.022	.148	-14.196	-12.225	-1.000	50
51	-.043	1.146	-.514	1.407	-.303	.855	-22.968	-4.638	-1.000	51
52	-.312	.857	.288	.924	-.379	.651	13.102	-2.437	-1.000	52
53	-.444	.356	.166	.380	-.478	.434	11.390	-.615	-1.000	53
54	.042	.084	.080	.134	-.028	.081	41.019	-4.783	-1.000	54
55	.200	.309	.275	.534	-.026	.280	39.400	-20.500	-1.000	55
56	-.166	.198	.127	.238	-.206	.222	17.513	-1.155	-1.000	56
57	-.036	.160	-.075	.185	-.062	.124	-18.808	-3.007	-1.000	57
58	-1.851	1.181	-.780	1.342	-2.032	1.687	-13.388	-.661	-1.000	58
59	-1.983	.815	.590	.743	-2.111	1.427	12.215	-.352	-1.000	59
60	-.356	.302	.047	.305	-.359	.332	4.080	-.850	-1.000	60
61	.312	.016	-.003	.018	.010	.004	-31.368	1.727	.270	61
62	.169	.127	.115	.284	.031	.118	30.175	8.439	2.785	62
63	.786	-.180	.484	.974	-.367	.870	88.112	-2.857	-1.000	63
64	.471	.807	-.140	.895	.383	.158	-32.073	1.813	.302	64
65	.681	.722	-.010	.724	.675	.023	-12.482	1.066	.025	65
66	.506	.537	-.038	.582	.481	.041	-33.846	1.170	.083	66
67	.232	.318	-.023	.323	.228	.049	-13.943	1.429	.160	67
68	.027	.031	.033	.088	.001	.034	47.571	73.738	27.038	68
69	.441	-.265	.204	.498	-.310	.403	74.622	-1.600	-1.000	69
70	.503	.589	-.035	.601	.490	.055	-19.512	1.225	.084	70
71	.585	.633	-.005	.633	.584	.025	-6.104	1.084	.031	71
72	.402	.438	-.013	.442	.398	.022	-17.738	1.113	.042	72
73	.286	.281	-.010	.294	.273	.011	-51.168	1.078	.029	73
74	.011	.019	-.001	.020	.011	.004	-6.294	1.741	.275	74
75	.351	.588	.019	.570	.349	.110	4.858	1.631	.234	75
76	.291	.332	.002	.332	.291	.020	2.420	1.140	.052	76
77	.336	.375	-.003	.376	.336	.020	-3.626	1.120	.044	77
78	.248	.235	-.004	.248	.234	.007	-70.746	1.058	.022	78

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SSTIPN: 1 LAYER OF GEOTEXTILE, P=2000 PPI, T=0

TOTAL NUMBER OF NODES------------------- 55
NUMBER OF BAR ELEMENTS------------------  9
NUMBER OF DIFF. BAR MATERIALS-----------  1
NUMBER OF BEAM ELEMENTS-----------------  0
NUMBER OF DIFF. BEAM MATERIALS----------  0
NUMBER OF NODAL LINKS ------------------  0
NUMBER OF INTERFACE ELEMENTS------------  0
NO  OF INTERFACE ELE. IN PREEXIST  PART  0
NUMBER OF INTERFACE ELE  IN FOUNDATION-  0
NUMBER OF INTERFACE MATERIALS-----------  0
TOTAL NUMBER OF SOIL ELEMENTS---------- 78
NUMBER OF DIFF  SOIL MATERIALS----------  3
NUMBER OF ELEMENTS IN FOUNDATION------- 36
NUMBER OF NODES IN FOUNDATION---------- 52
NUMBER OF PREEXISTING ELEMENTS----------  0
NUMBER OF PREEXISTING NODES-------------  0
NUMBER OF CONSTRUCTION LAYERS-----------  6
NUMBER OF LOAD CASES--------------------  1

CALING FACTOR ---------      1 00000

ATMOSPHERIC PRESSURE ---      1.05800

UNIT WEIGHT OF WATER ---       03120


OMPUTATION SEQUENCE FOR A TOTAL OF     7  INCREMENTS
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 INCREMENT NO.  1     PUT ON LAYER NO.  1

 INCREMENT NO.  2     PUT ON LAYER NO.  2

 INCREMENT NO.  3     PUT ON LAYER NO.  3

 INCREMENT NO.  4     PUT ON LAYER NO.  4

 INCREMENT NO.  5     PUT ON LAYER NO.  5

 INCREMENT NO   6     PUT ON LAYER NO.  6

 INCREMENT NO.  7     APPLY LOAD CASE   1
```

NODAL POINT INPUT DATA

NODE NUMBER	NODAL POINT COORDINATES X-ORD	Y-ORD	B.C. CODE X	Y	ZZ
1	.000	.000	1	1	1
2	10.000	.000	1	1	1
3	20.000	.000	1	1	1
4	30.000	.000	1	1	1
5	38.000	.000	1	1	1
6	42.000	.000	1	1	1
7	50.000	.000	1	1	1
8	54.000	.000	1	1	1
9	58.000	.000	1	1	1
10	66.000	.000	1	1	1
11	74.000	.000	1	1	1
12	82.000	.000	1	1	1
13	90.000	.000	1	1	1
14	.000	4.000	1	0	1
15	10.000	4.000	0	0	0
16	20.000	4.000	0	0	0
17	30.000	4.000	0	0	0
18	38.000	4.000	0	0	0
19	42.000	4.000	0	0	0
20	50.000	4.000	0	0	0
21	54.000	4.000	0	0	0
22	58.000	4.000	0	0	0
23	66.000	4.000	0	0	0
24	74.000	4.000	0	0	0
25	82.000	4.000	0	0	0
26	90.000	4.000	1	0	1
27	.000	7.000	1	0	1
28	10.000	7.000	0	0	0
29	20.000	7.000	0	0	0
30	30.000	7.000	0	0	0
31	38.000	7.000	0	0	0
32	42.000	7.000	0	0	0
33	50.000	7.000	0	0	0
34	54.000	7.000	0	0	0
35	58.000	7.000	0	0	0
36	66.000	7.000	0	0	0
37	74.000	7.000	0	0	0
38	82.000	7.000	0	0	0
39	90.000	7.000	1	0	1
40	.000	10.000	1	0	1
41	10.000	10.000	0	0	0
42	20.000	10.000	0	0	0
43	30.000	10.000	0	0	0
44	38.000	10.000	0	0	0
45	42.000	10.000	0	0	0
46	50.000	10.000	0	0	0
47	54.000	10.000	0	0	0
48	58.000	10.000	0	0	0
49	66.000	10.000	0	0	0
50	74.000	10.000	0	0	0
51	82.000	10.000	0	0	0
52	90.000	10.000	1	0	1
53	38.000	11.500	0	0	0
54	42.000	11.500	0	0	0
55	50.000	11.500	0	0	0
56	54.000	11.500	0	0	0
57	58.000	11.500	0	0	0
58	66.000	11.500	0	0	0
59	74.000	11.500	0	0	0
60	82.000	11.500	0	0	0
61	90.000	11.500	1	0	1
62	42.000	13.000	0	0	0
63	50.000	13.000	0	0	0
64	54.000	13.000	0	0	0
65	58.000	13.000	0	0	0
66	66.000	13.000	0	0	0
67	74.000	13.000	0	0	0
68	82.000	13.000	0	0	0
69	90.000	13.000	1	0	1
70	46.000	14.000	0	0	0
71	50.000	14.000	0	0	0
72	54.000	14.000	0	0	0
73	58.000	14.000	0	0	0
74	66.000	14.000	0	0	0
75	74.000	14.000	0	0	0
76	82.000	14.000	0	0	0
77	90.000	14.000	1	0	1
78	50.000	15.000	0	0	0
79	54.000	15.000	0	0	0
80	58.000	15.000	0	0	0
81	66.000	15.000	0	0	0
82	74.000	15.000	0	0	0
83	82.000	15.000	0	0	0
84	90.000	15.000	1	0	1
85	54.000	16.000	0	0	0
86	58.000	16.000	0	0	0
87	66.000	16.000	0	0	0
88	74.000	16.000	0	0	0
89	82.000	16.000	0	0	0
90	90.000	16.000	1	0	1
91	58.000	17.000	0	0	0
92	66.000	17.000	0	0	0
93	74.000	17.000	0	0	0
94	82.000	17.000	0	0	0
95	90.000	17.000	1	0	1

BAR ELEMENTS-------

MATERIAL NUMBER	E	AREA	WEIGHT/LENGTH
1	80.	1.00	0.

ELMT NO.	CONNECTED NODES I	J	MATL NO.
1	43	44	1
2	44	45	1
3	45	46	1
4	46	47	1
5	47	48	1
6	48	49	1
7	49	50	1
8	50	51	1
9	51	52	1

SOIL MATERIAL PROPERTY DATA

MATL	UNIT WT	YOUNG'S MODUL CONSTANT	EXPONENT	ATIO	BULK MODULUS CONSTANT	EXPONENT	STRENGTH PARAMETERS C	PHI	DPHI	KO
1	.0880	8000.00	.500	.500	1500.00	.600	.00	35.00	.00	.50
2	.0530	10.00	.300	.900	20.00	.200	.05	.00	.00	.50
3	.0800	1000.00	.400	.700	800.00	.500	.50	40.00	.00	.50

FOUR NODES SOLID ELEMENT DATA

ELET NO.	CONNECTED NODES I	J	K	L	MATL NO.	ELEMENT CENTER COORDINATES X-ORD	Y-ORD
1	1	2	15	14	3	5.000	2.000
2	2	3	16	15	3	15.000	2.000
3	3	4	17	16	3	25.000	[illegible]
4	4	5	18	17	2	33.000	[illegible]
5	5	6	19	18	2	39.000	2.000
6	6	7	20	19	2	46.000	2.000
7	7	8	21	20	2	52.000	2.000
8	8	9	22	21	2	58.000	2.000
9	9	10	23	22	3	62.000	2.000
10	10	11	24	23	3	70.000	2.000
11	11	12	25	24	3	76.000	2.000
12	12	13	26	25	3	86.000	2.000
13	14	15	28	27	3	5.000	5.500
14	15	16	29	28	3	15.000	5.500
15	16	17	30	29	2	25.000	5.500
16	17	18	31	30	2	33.000	5.500
17	18	19	32	31	2	39.000	5.500
18	19	20	33	32	2	46.000	5.500
19	20	21	34	33	2	52.000	5.500
20	21	22	35	34	2	58.000	5.500
21	22	23	36	35	2	62.000	5.500
22	23	24	37	36	3	70.000	5.500
23	24	25	38	37	3	76.000	5.500
24	25	26	39	38	3	86.000	5.500
25	27	28	41	40	3	5.000	8.500
26	28	29	42	41	2	15.000	8.500
27	29	30	43	42	2	25.000	8.500
28	30	31	44	43	2	33.000	8.500
29	31	32	45	44	2	39.000	8.500
30	32	33	46	45	2	46.000	8.500
31	33	34	47	46	2	52.000	8.500
32	34	35	48	47	2	58.000	8.500
33	35	36	49	48	2	62.000	8.500
34	36	37	50	49	2	70.000	8.500
35	37	38	51	50	3	78.000	8.500
36	38	39	52	51	3	86.000	8.500
37	43	44	53	63	1	34.500	10.750
38	44	45	54	53	1	39.000	10.750
39	45	46	55	54	1	46.000	10.750
40	46	47	56	55	1	52.000	10.750
41	47	48	57	56	1	58.000	10.750
42	48	49	58	57	1	62.000	10.750
43	49	50	59	58	1	70.000	10.750
44	50	51	60	59	1	78.000	10.750
45	51	52	61	60	1	86.000	10.750
46	53	54	62	62	1	40.500	12.250
47	54	55	63	62	1	46.000	12.250
48	55	56	64	63	1	52.000	12.250
49	56	57	65	64	1	58.000	12.250
50	57	58	66	65	1	62.000	12.250
51	58	59	67	66	1	70.000	12.250
52	59	60	68	67	1	78.000	12.250
53	60	61	69	68	1	86.000	12.250
54	62	63	71	70	1	47.000	13.500
55	63	64	72	71	1	52.000	13.500
56	64	65	73	72	1	58.000	13.500
57	65	66	74	73	1	62.000	13.500
58	66	67	75	74	1	70.000	13.500
59	67	68	76	75	1	78.000	13.500
60	68	69	77	76	1	86.000	13.500
61	70	71	78	78	1	48.000	14.500
62	71	72	79	78	1	52.000	14.500
63	72	73	80	79	1	58.000	14.500
64	73	74	81	80	1	62.000	14.500
65	74	75	82	81	1	70.000	14.500
66	75	76	83	82	1	78.000	14.500
67	76	77	84	83	1	86.000	14.500
68	78	79	86	85	1	53.000	15.500
69	79	80	86	85	1	58.000	15.500
70	80	81	87	86	1	62.000	15.500
71	81	82	88	87	1	70.000	15.500
72	82	83	89	88	1	78.000	15.500
73	83	84	90	89	1	86.000	15.500
74	85	86	91	91	1	57.000	16.500
75	86	87	92	91	1	62.000	16.500
76	87	88	93	92	1	70.000	16.500
77	88	89	94	93	1	78.000	16.500
78	89	90	95	94	1	86.000	16.500

CONSTRUCTION ER INFORMATION

```
SSTIPN: 1 LAYER OF GEOTEXTILF, P=2000 PPI, T=0

***************************************************
***************************************************
*                                                 *
*   LOAD CASE --------------------------------  1 *
*                                                 *
***************************************************
***************************************************

LARGEST ELE  NO. IN THIS INCREMENT   78

LARGEST N P  NO  IN THIS INCREMENT   96

BAND WIDTH----------------------  40
TOTAL NUMBER OF EQUATIONS--------- 222
NUMBER OF EQUATIONS IN BLOCK------  86
NUMBER OF BLOCKS-----------------   3
NUMBER OF N P. FORCE CARDS--------  3
NUMBER OF PRESSURE CARDS---------  0
```

NODAL POINT FORCES (WEIGHTS OF ADDED ELEMENTS)

NP	X-FORCE	Y-FORCE
1	0.	0.
2	0.	0.
3	0.	0.
4	0.	0.
5	0.	0.
6	0.	0.
7	0.	0.
8	0.	0.
9	0.	0.
10	0.	0.
11	0.	0.
12	0.	0.
13	0.	0.
14	0.	0.
15	0.	0.
16	0.	0.
17	0.	0.
18	0.	0.
19	0.	0.
20	0.	0.
21	0.	0.
22	0.	0.
23	0.	0.
24	0.	0.
25	0.	0.
26	0.	0.
27	0.	0.
28	0.	0.
29	0.	0.
30	0.	0.
31	0.	0.
32	0.	0.
33	0.	0.
34	0.	0.
35	0.	0.
36	0.	0.
37	0.	0.
38	0.	0.
39	0.	0.
40	0.	0.
41	0.	0.
42	0.	0.
43	0.	0.
44	0.	0.
45	0.	0.
46	0.	0.
47	0.	0.
48	0.	0.
49	0.	0.
50	0.	0.
51	0.	0.
52	0.	0.
53	0.	0.
54	0.	0.
55	0.	0.
56	0.	0.
57	0.	0.
58	0.	0.
59	0.	0.
60	0.	0.
61	0.	0.
62	0.	0.
63	0.	0.
64	0.	0.
65	0.	0.
66	0.	0.
67	0.	0.
68	0.	0.
69	0.	0.
70	0.	0.
71	0.	0.
72	0.	0.
73	0.	0.
74	0.	0.
75	0.	0.
76	0.	0.
77	0.	0.
78	0.	0.
79	0.	0.
80	0.	0.
81	0.	0.
82	0.	0.
83	0.	0.
84	0.	0.
85	0.	0.
86	0.	0.
87	0.	0.
88	0.	0.
89	0.	0.
90	0.	0.
91	0.	0.
92	0.	-4.50
93	0.	-4.50
94	0.	-2.00
95	0.	0.

LOAD CASE : 1 ITERATION : 2

NP	DELTA-X	DELTA-Y	DELTA-ZZ	X-DISP	Y-DISP	ZZ-ROTAT	TOTAL	NP
1	.0000	.0000	.0000	.0000	.0000	.0000	.0030	1
2	.0000	.0000	.0000	.0000	.0000	.0000	.0000	2
3	.0000	.0000	.0000	0000	.0000	.0000	.0000	3
4	0000	0000	0000	0000	0000	0000	.0000	4
5	.0000	.0000	.0000	.0000	.0000	.0000	.0000	5
6	.0000	.0000	.0000	.0000	.0000	.0000	.0000	6
7	.0000	.0000	.0000	.0000	.0000	.0000	.0000	7
8	0000	0000	0000	0000	0000	0000	0000	8
9	.0000	0000	.0000	0000	.0000	.0000	.0000	9
10	.0000	.0000	.0000	0000	.0000	.0000	.0000	10
11	.0000	.0000	.0000	.0000	.0000	.0000	.0000	11
12	.0000	0000	0000	0000	0000	0000	0000	12
13	.0000	0000	.0000	.0000	.0000	.0000	.0000	13
14	.0000	0000	.0000	.0000	.0000	.0000	.0000	14
15	.0000	0000	.0000	-.0002	.0000	.0000	0002	15
16	0000	0000	0000	- 0004	- 0006	0000	0007	16
17	-.0004	.0002	.0000	-.0048	.0027	.0000	.0052	17
18	-.0222	.0128	.0000	-.2274	.0571	.0000	.2344	18
19	-.0463	0039	.0000	-.3416	- 0661	.0000	.3479	19
20	- 0494	- 0078	0000	- 2136	-.1340	0000	.2564	20
21	-.0319	- 0237	.0000	-.0536	-.1609	.0000	.1662	21
22	-.0011	-.0012	.0000	-.0011	-.0081	.0000	.0082	22
23	-.0010	-.0018	.0000	-.0003	-.0050	.0000	0050	23
24	0007	- 0055	0000	0012	- 0104	0000	0105	24
25	.0020	-.0021	.0000	0021	-.0055	.0000	0055	25
26	.0000	.0004	.0000	.0000	-.0028	.0000	.0028	26
27	.0000	.0000	.0000	.0000	.0001	.0000	.0001	27
28	0000	0000	0000	0000	- 0003	0000	.0003	28
29	-.0001	.0000	.0000	-.0017	.0002	.0000	.0017	29
30	-.0131	.0048	.0000	- 2375	.0635	.0000	.2459	30
31	-.0375	.0264	.0000	-.3529	.1129	.0000	.3705	31
32	- 0678	0145	0000	- 4458	- 1100	0000	4592	32
33	-.1024	-.0090	0000	- 3940	-.2649	.0000	.4748	33
34	-.1149	-.0318	.0000	-.3377	-.2787	.0000	.4366	34
35	-.1011	-.0485	.0000	-.2350	-.2026	.0000	3103	35
36	- 0009	- 0048	.0000	0097	- 0139	0000	.0139	36
37	.0016	-.0108	.0000	.0019	-.0192	0000	.0192	37
38	.0022	-.0039	.0000	.0019	-.0106	0000	.0108	38
39	.0000	.0018	.0000	.0000	-.0045	.0000	.0045	39
40	0000	0000	0000	0000	0001	0000	0001	40
41	.0000	.0000	.0000	.0002	-.0003	.0000	.0003	41
42	-.0138	0069	.0000	-.1440	.0508	.0000	.1533	42
43	-.0421	.0102	.0000	-.3120	.0617	.0000	.3282	43
44	- 0465	0347	0000	- 3187	1222	0000	3414	44
45	-.0469	.0212	.0000	-.3050	-.1623	.0000	.3411	45
46	-.0485	-.0071	.0000	-.2814	-.3823	.0000	4487	46
47	-.0500	-.0350	.0000	-.2283	-.3742	.0000	.4373	47
48	- 0489	- 0702	0000	- 1825	- 3378	0000	.3840	48
49	-.0236	-.0684	.0000	-.0731	-.2294	.0000	.2408	49
50	-.0014	-.0271	.0000	-.0057	-.0456	.0000	.0460	50
51	-.0001	-.0039	.0000	-.0014	-.0128	.0000	0127	51
52	0000	.0025	0000	0000	-.0076	0000	0076	52
53	-.0433	.0347	.0000	-.5707	.1880	.0000	.5822	53
54	-.0432	.0212	.0000	-.4842	-.1374	.0000	.5034	54
55	-.0413	-.0071	.0000	-.2776	-.3439	.0000	.4420	55
56	- 0363	- 0356	0000	- 2109	- 3910	0000	4442	56
57	-.0319	-.0731	.0000	-.1641	-.3671	.0000	.4021	57
58	-.0148	-.0812	.0000	-.0671	-.2072	.0000	.2755	58
59	-.0067	-.0307	.0000	.0385	-.0974	.0000	.1048	59
60	-.0031	-.0039	.0000	-.0044	-.0117	.0000	.0125	60
61	.0000	.0025	.0000	.0000	-.0059	.0000	.0059	61
62	-.0400	.0212	.0000	- 0889	.0082	.0000	.0893	62
63	-.0307	-.0071	.0000	-.0658	-.1487	.0000	.1715	63
64	-.0286	-.0376	.0000	-.0873	-.2074	.0000	.2252	64
65	-.0233	-.0769	.0000	-.0785	- 2499	.0000	.2623	65
66	- 0220	- 0925	0000	- 0850	- 1911	0000	2019	66
67	-.0143	-.0326	.0000	-.0321	-.1270	.0000	.1309	67
68	-.0084	-.0044	.0000	-.0082	-.0107	.0000	.0135	68
69	.0000	.0025	.0000	.0000	.0040	.0000	.0040	69
70	- 4854	.0175	0000	- 5249	- 0254	0000	5255	70
71	-.6116	.0051	.0000	-.6840	-.0683	.0000	.6866	71
72	-.6148	-.0486	.0000	-.6587	- 1635	.0000	.6787	72
73	-.6193	-.1283	.0000	- 6639	-.2602	.0000	.7088	73
74	- 0309	- 0943	0000	- 0708	- 1703	0000	1844	74
75	-.0151	-.0335	.0000	-.0379	-.1382	.0000	.1433	75
76	-.0081	-.0048	.0000	-.0102	-.0100	.0000	.0148	76
77	.0000	.0029	.0000	.0005	-.0030	.0000	.0030	77
78	- 5991	0057	0000	- 6208	- 0471	.0000	6226	78
79	-.5966	-.0496	.0000	-.6214	- 1182	.0000	.6321	79
80	-.6008	-.1252	.0000	-.6249	-.2008	.0000	.6564	80
81	-.6333	- 2578	.0000	-.9580	-.3074	.0000	1.0062	81
82	- 0031	- 2207	0000	- 0184	- 3434	0000	3438	82
83	6866	-.0587	.0000	.5950	-.0604	.0000	.5981	83
84	.0000	.0823	0000	.0009	.0790	.0000	.0790	84
85	-.6338	-.0540	0000	-.6120	-.0731	.0000	.6462	85
86	- 6910	-.0819	.0000	- 7005	- 1089	0000	7089	86
87	-.6673	-.3843	.0000	-.6971	-.4187	.0000	.8131	87
88	-.6612	-.5708	.0000	-.6667	-.6029	0000	.8869	88
89	.2751	-.1378	.0000	.2720	-.1400	.0000	.3060	89
90	0000	2035	0000	0000	2017	0000	2017	90
91	- 6500	-.0616	.0000	-.6500	- 0615	0000	.6551	91
92	6518	- 3951	0000	- 6518	-.3951	.0000	.7622	92
93	-.6456	- 5754	0000	-.6456	- 5754	.0000	.8648	93
94	- 1127	-.3158	0000	- 1127	- 3158	0000	3353	94
95	.0000	.3075	.0000	.0000	3075	.0000	.3075	95

STRUCTURAL ELEMENTS - LINEAR ELASTIC

*BAR ELEMENTS--INTERNAL MEMBER FORCES

ELEMENT NO	AXIAL FORCE
INCREMENTAL VALUES	
1	- 0438
2	- 0041
3	- 0121
4	- 0222
5	0465
6	1749
7	1665
8	0093
9	0010
TOTAL VALUES	
1	-.0875
2	.1372
3	3275
4	.5256
5	6584
6	6205
7	5054

8 .0320
9 .0108

FOUR NODE SOLID ELEMENTS - MODULI AND STRAINS (STRAINS IN PERCENT)

ELE	ELAS MOD	BULK MOD	SHEAR MOD	POIS	EPS-X	EPS-Y	GAM-XY	EPS-1	EPS-3	GAMMAX	ELE
1	528.3	330.5	227.7	.155	.001	.000	.002	.002	-.001	.002	1
2	523.9	333.0	225.5	.161	.001	.007	.010	.010	-.002	.011	2
3	524.2	330.1	225.6	.157	.022	-.019	.052	.035	-.032	.067	3
4	.6	17.2	.2	.494	1.855	-.739	2.444	2.340	-1.224	3.564	4
5	.6	17.1	.2	.494	.952	.114	8.139	4.624	-3.558	8.182	5
6	.7	17.9	.2	.494	-.766	2.501	7.427	4.924	-3.191	8.115	6
7	.7	18.4	.2	.493	-1.462	3.886	4.240	4.436	-2.312	6.747	7
8	.6	18.8	.2	.494	-1.067	2.088	-.751	2.131	-1.199	3.330	8
9	457.3	338.6	186.8	.224	-.005	.139	.011	.140	-.006	.146	9
10	471.5	362.2	190.6	.237	-.010	.193	.022	.194	-.010	.204	10
11	475.6	370.9	191.4	.242	-.008	.198	-.073	.205	-.012	.217	11
12	510.2	382.8	210.9	.209	.013	.193	-.044	.106	.008	.099	12
13	438.7	257.3	194.7	.122	.001	.002	-.001	.002	.001	.002	13
14	466.2	273.3	209.7	.116	.010	-.006	.019	.014	-.013	.026	14
15	2.1	13.8	.7	.475	1.201	-1.036	3.571	2.190	-2.025	4.214	15
16	4.4	16.0	1.5	.453	2.818	-1.954	5.101	3.922	-3.061	6.983	16
17	1.6	16.8	.5	.484	1.727	-.199	6.713	4.256	-2.728	6.983	17
18	.6	17.1	.2	.494	-1.082	2.914	6.061	4.540	-2.716	7.256	18
19	.6	17.1	.2	.494	-2.265	4.112	7.474	5.838	-3.989	9.825	19
20	.7	18.2	.2	.494	-2.441	6.204	5.106	5.978	-3.215	9.193	20
21	.6	17.2	.2	.494	-1.479	3.423	2.895	3.769	-1.825	5.594	21
22	420.1	341.5	167.4	.255	-.017	.294	.037	.295	-.016	.313	22
23	402.0	307.5	163.3	.231	-.008	.231	-.093	.240	-.015	.254	23
24	453.0	307.4	190.2	.191	.025	.115	-.062	.122	.018	.103	24
25	408.6	229.5	188.9	.083	-.001	.000	.001	.001	-.001	.002	25
26	.0	.1	.0	.495	.733	-.639	2.124	1.268	-1.374	2.643	26
27	1.5	13.5	.5	.481	2.015	-1.310	3.103	2.627	-1.922	4.549	27
28	2.6	13.9	.9	.468	1.017	-.625	.007	1.017	-.625	1.643	28
29	1.3	14.1	.4	.485	.980	.558	1.234	1.228	-.010	1.238	29
30	.5	15.0	.2	.494	-.567	2.336	-2.279	2.725	-.966	3.713	30
31	.6	15.6	.2	.494	-1.142	3.248	-3.773	3.947	-1.841	5.788	31
32	.6	15.5	.2	.494	-1.831	3.679	-4.114	4.543	-2.495	7.038	32
33	.7	17.6	.2	.494	-2.157	5.845	-1.503	5.915	-2.227	8.142	33
34	.7	17.3	.2	.494	-.425	4.032	.242	4.036	-.432	4.468	34
35	279.5	246.0	109.2	.280	-.027	.475	-.078	.477	-.029	.507	35
36	344.5	216.9	148.9	.157	.003	.085	-.013	.086	.003	.083	36
37	.1	4.0	.0	.495	.139	.254	16.798	8.596	-8.203	16.798	37
38	1238.7	619.3	619.3	.000	-.631	2.067	20.128	10.785	-9.550	20.335	38
39	408.2	449.5	152.7	.339	-1.548	3.930	10.272	7.012	-4.630	11.641	39
40	250.5	428.8	89.8	.395	-1.256	4.748	1.970	4.905	-1.414	6.319	40
41	116.0	412.2	40.7	.451	-1.101	5.200	-.678	5.219	-1.119	6.338	41
42	11.9	398.6	4.0	.495	-1.244	4.282	-1.346	4.372	-1.325	5.697	42
43	11.9	398.6	4.0	.495	-1.050	3.574	-3.603	4.282	-1.658	5.941	43
44	684.6	583.4	280.2	.277	.244	1.885	-2.102	2.382	-.273	2.655	44
45	1174.9	683.7	523.1	.123	-.037	.083	.031	.085	-.039	.104	45
46	188.5	420.6	66.4	.421	-.036	.043	.157	.109	-.104	.213	46
47	.1	4.0	.0	.495	-.110	.049	.463	.215	-.275	.490	47
48	231.0	426.1	82.3	.403	-.126	.154	.185	.182	-.154	.336	48
49	11.9	398.6	4.0	.495	-.323	.295	.331	.338	-.364	.700	49
50	359.6	443.1	133.3	.350	-.369	.374	-.147	.381	-.376	.758	50
51	617.7	535.8	242.5	.274	-.388	2.918	.091	2.919	-.389	3.288	51
52	746.0	587.5	290.9	.282	-.218	2.769	-.281	2.773	-.222	2.997	52
53	643.9	486.7	260.0	.238	-.079	.077	.052	.082	-.083	.165	53
54	.1	4.0	.0	.495	.963	-1.170	49.963	24.940	-25.067	50.007	54
55	.1	4.0	.0	.495	.020	.009	59.457	29.743	-29.713	59.457	55
56	.1	4.0	.0	.495	-.059	3.249	60.614	31.947	-28.757	60.704	56
57	.1	4.0	.0	.495	-3.601	2.605	30.113	14.917	-15.912	30.829	57
58	806.3	634.6	325.2	.244	-.388	2.853	.850	2.908	-.424	3.332	58
59	1410.7	614.3	635.4	.110	-.280	2.734	-.513	2.756	-.302	3.058	59
60	435.0	453.6	165.0	.318	-.117	.084	.082	.098	-.121	.220	60
61	.1	4.0	.0	.495	3.204	-.084	-.577	3.230	.086	3.316	61

62	435.6	452.8	161.4	.318	.051	-.022	-.028	.054	-.025	.078	62
63	258.7	428.7	93.3	.391	.075	-.028	.272	.172	-.121	.283	63
64	.1	4.0	.0	.495	-1 626	8.166	44.807	28.202	-18 662	46.884	64
65	1	4.0	.0	.495	-6.032	21.934	44.578	34.283	-18 361	52.624	65
66	.1	4.0	.0	.495	-3.919	16.365	-33.019	25 589	-13.153	38.752	66
67	1	4 0	0	495	3 652	-1 370	-31 194	13 941	-14 656	31 599	67
68	.1	4.0	.0	.495	.001	.438	4.464	2.381	-2.223	4.684	68
69	.1	4.0	.0	.495	.748	-1.945	7.642	3.453	-4.650	8.103	69
70	1	4.0	.0	.495	2.063	4.686	-6.017	6.201	.536	5.066	70
71	1	4 0	.0	495	-6 036	22.652	21 902	26 354	-9 738	36 093	71
72	.1	4.0	.0	.495	-9 634	19.661	44.669	31.972	-21.726	53.696	72
73	.1	4.0	.0	.495	5 424	-1.974	13.184	9.284	-5.634	15.118	73
74	.1	4.0	.0	.495	1.429	-.035	-3.397	2.347	-1.153	3.699	74
75	1032 5	586 2	472.4	097	- 012	024	092	056	- 0-1	098	75
76	380.7	443.2	133.7	.349	-.201	.169	-.323	.319	-.261	.571	76
77	.1	4.0	.0	.495	-9 170	9.129	14.182	11.555	-11 596	23.152	77
78	.1	4.0	.0	.495	1.002	3.702	13.261	9.118	-4 / 4	13.533	78

FOUR NODE SOLID ELEMENTS - STRESSES

ELE	SIG-X	SIG-Y	TAU-XY	SIG-1	SIG-3	TAU-MAX	THETA	SIG1/SIG3	LEVEL	ELE
1	.245	.483	.005	.483	.245	.119	1.280	1.970	.079	1
2	.253	.520	.022	.522	.252	.135	4.689	2.075	.069	2
3	.348	.380	.124	.484	.243	.125	40.166	2.031	.083	3
4	.366	.535	.005	.535	.366	.085	1.889	1.464	1.698	4
5	.353	.529	.017	.531	.352	.090	5.371	1.510	1.783	5
6	461	654	018	655	459	098	4 724	1 427	1 981	6
7	.527	.730	.010	.730	.527	.102	2.708	1.388	2.038	7
8	.322	.515	-.001	.515	.322	.097	-.422	1.601	1.932	8
9	.324	1.069	.015	1.070	.324	.373	1.179	3.301	.225	9
10	400	1 381	042	1.383	398	492	2 441	3 471	275	10
11	.438	1.426	-.142	1.446	.418	.514	-7.982	3 461	.282	11
12	.374	.919	-.092	.934	.359	.288	-9.283	2.601	.187	12
13	.140	.280	-.002	.280	.140	.070	-.814	2.000	.053	13
14	175	235	038	253	158	048	25 951	1 620	036	14
15	.122	182	.015	.186	.119	.038	11.627	1.646	768	15
16	.250	.282	.033	.294	.228	.033	44.249	1.287	855	16
17	.329	.402	.019	.407	.325	.041	13.702	1.252	.820	17
18	.362	467	012	468	.361	054	6.591	1.297	1 073	18
19	.362	.476	.015	.478	.360	.059	7.466	1.328	1.183	19
20	.521	.644	.012	.645	.520	.062	5.483	1.240	1.247	20
21	.381	.481	.006	.482	.381	.056	2.898	1.282	1.111	21
22	384	1 575	061	1 578	381	598	2 925	4 143	341	22
23	.314	1.205	-.154	1.231	.288	.472	-9.542	4.277	.297	23
24	.300	.683	-.099	.707	.276	.216	-13.734	2.564	.137	24
25	.042	.091	.003	.091	.042	025	2.946	2.196	.022	25
26	001	- 006	003	003	- 007	005	69 306	- 378	-1 000	26
27	.092	.011	.009	.093	.010	.041	83.660	9.119	.829	27
28	.100	.025	.005	100	.025	038	86.553	4 042	.782	28
29	133	.214	007	.214	.132	.041	4.781	1.622	.822	29
30	196	299	- 007	299	195	052	-3 835	1 533	1 040	30
31	.253	.358	-.010	.359	.252	.053	-5.233	1.420	1.081	31
32	241	.348	-.016	.351	.239	.056	-8.472	1.469	1.120	32
33	523	.640	-.002	.641	.523	.059	-1.184	1.226	1.160	33
34	.517	.615	006	615	517	049	2 278	1.190	984	34
35	.422	1.681	-.074	1.686	.417	.634	-3.334	4.039	.348	35
36	.056	.337	-.017	.338	.055	.142	-3.387	6.198	.121	36
37	.078	.071	-.085	.139	.010	.065	-46.546	14.525	5.028	37
38	089	124	- 008	125	087	019	-12 611	1 441	164	38
39	.017	.253	.031	.257	.013	.122	7.365	19.797	5.567	39
40	-.024	.310	.105	.341	-.054	.197	16.083	-6.337	-1.000	40
41	-.111	.465	-.014	465	-.111	288	-1.386	-4.177	-1.000	41
42	-.011	.414	-.068	.424	-.022	.223	-8.893	-19.568	-1.000	42
43	.227	.802	-.132	.831	.198	.318	-12.355	4.196	1.188	43
44	.285	1.403	-.055	1.406	.283	572	-2.783	5.353	1.618	44
45	-.157	.351	.126	.380	-.186	.288	13.016	-2.092	-1.000	45
46	.029	061	.021	.071	.019	.026	26.267	3.628	1.051	46
47	.057	.123	.114	.209	-.079	.119	38.953	-7.263	-1.000	47
48	- 090	418	133	451	-.123	287	13 848	-3 682	-1 000	48
49	-.187	.043	-.108	.089	-.213	.151	-22.948	-.419	-1.000	49
50	- 377	.480	.161	.510	-.408	.458	10.289	-1.255	-1.000	50
51	- 478	.894	-.647	1.152	-.733	942	-21.884	-1.571	-1.000	51
52	- 270	955	225	995	- 310	652	10 073	-3.214	-1 000	52
53	-.332	.344	120	.364	-.352	.358	9.756	-1.035	-1.000	53
54	.035	.055	.114	.160	-.070	.115	42.404	-2.289	-1.000	54
55	.080	.205	.129	286	-.001	.143	31.946	-482.010	-1.000	55
56	175	344	027	348	171	089	8 711	2 037	388	56
57	- 059	.154	-.082	.189	-.043	.115	-22.481	-4.343	-1.000	57
58	-.871	1.004	-.302	1.051	-.918	.985	-8.836	-1.145	-1.000	58
59	-1.589	.823	.172	.835	-1.601	1.218	4.066	-.522	-1.000	59
60	- 419	242	108	259	- 436	348	9 053	- 594	-1 000	60
61	.128	.121	.011	.135	.112	.011	61.306	1.206	.076	61
62	.305	.046	.002	.305	.046	.129	89.611	6.567	2.089	62
63	.483	.073	.317	.655	-.100	.377	61.473	-6.561	-1.000	63
64	381	450	- 089	505	306	100	-31 768	1 652	242	64
65	.701	.775	.013	.777	.699	.039	9.445	1 111	.041	65
66	.505	.538	-.013	.543	.500	.021	-19.218	1.085	.031	66
67	.200	.308	-.008	.309	.199	.055	-4.078	1 551	.205	67
68	.040	038	- 002	041	036	003	-54 609	1 140	052	68
69	.025	.024	.054	.078	-.029	.054	45.066	-2.669	-1.000	69
70	.321	.385	-.020	.391	.315	.038	-16.302	1 242	.090	70
71	.688	.708	.009	.710	.686	.022	11.825	1.085	024	71
72	414	484	018	481	407	027	20 713	1 133	049	72
73	.218	.253	.006	.254	.217	018	9 150	1.169	.063	73
74	085	072	.001	.072	085	.004	5.461	1.118	.043	74
75	- 085	.271	432	580	-.375	488	33.811	-1.493	-1.000	75
76	- 311	984	- 432	1 097	-.443	770	-17 058	-2 474	-1 000	76
77	008	.040	.006	041	.007	.017	9.647	5.733	1.760	77
78	203	.223	005	.224	.202	.011	14.450	1.108	.040	78

```
SSTIPN: 1 LAYER OF GEOTEXTILE, P=2000 PPI, T=1000

TOTAL NUMBER OF NODES------------------ 95
NUMBER OF BAR ELEMENTS-----------------  9
NUMBER OF DIFF  BAR MATERIALS----------  1
NUMBER OF BEAM ELEMENTS----------------  0
NUMBER OF DIFF. BEAM MATERIALS---------  0
NUMBER OF NODAL LINKS -----------------  0
NUMBER OF INTERFACE ELEMENTS-----------  0
NO. OF INTERFACE ELE  IN PREEXIST  PART  0
NUMBER OF INTERFACE ELE. IN FOUNDATION-  0
NUMBER OF INTERFACE MATERIALS----------  0
TOTAL NUMBER OF SOIL ELEMENTS---------- 78
NUMBER OF DIFF  SOIL MATERIALS---------  3
NUMBER OF ELEMENTS IN FOUNDATION------- 36
NUMBER OF NODES IN FOUNDATION---------- 52
NUMBER OF PREEXISTING ELEMENTS---------  0
NUMBER OF PREEXISTING NODES------------  0
NUMBER OF CONSTRUCTION LAYERS----------  6
NUMBER OF LOAD CASES-------------------  2

CALING FACTOR ----------      1 00000

ATMOSPHERIC PRESSURE ---      1.05800

UNIT WEIGHT OF WATER ---       03120


OMPUTATION SEQUENCE FOR A TOTAL OF     8  INCREMENTS
-------------------------------------------------


 INCREMENT NO.   1      APPLY LOAD CASE   1

 INCREMENT NO    2      PUT ON LAYER NO   1

 INCREMENT NO    3      PUT ON LAYER NO.  2

 INCREME<T NO    4      PUT ON LAYER NO   3

 INCREMENT NO    5      PUT ON LAYER NO   4

 INCREMENT NO    6      PUT ON LAYER NO   5

 INCREMENT NO.   7      PUT ON LAYER NO   6

 INCREMENT NO    8      APPLY LOAD CASE   2
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NODAL POINT INPUT DATA

NODE NUMBER	NODAL POINT COORDINATES X-ORD	Y-ORD	B.C CODE X	Y	ZZ
1	000	000	1	1	1
2	10.000	.000	1	1	1
3	20.000	.000	1	1	1
4	30.000	.000	1	1	1
5	36 000	000	1	1	1
6	42.000	.000	1	1	1
7	50.000	.000	1	1	1
8	54.000	.000	1	1	1
9	58 000	000	1	1	1
10	66.000	.000	1	1	1
11	74 000	.000	1	1	1
12	82 000	.000	1	1	1
13	90 000	.000	1	1	1
14	000	4 000	1	0	1
15	10 000	4 000	0	0	0
16	20 000	4.000	0	0	0
17	30 000	4 000	0	0	0
18	36.000	4.000	0	0	0
19	42.000	4 000	0	0	0
20	50 000	4.000	0	0	0
21	54 000	4 000	0	0	0
22	58.000	4.000	0	0	0
23	66.000	4.000	0	0	0
24	74.000	4.000	0	0	0
25	82 000	4 000	0	0	0
26	90.000	4.000	1	0	1
27	000	7.000	1	0	1
28	10.000	7.000	0	0	0
29	20 000	7 000	0	0	0
30	30.000	7.000	0	0	0
31	36.000	7.000	0	0	0
32	42.000	7.000	0	0	0
33	50 000	7 000	0	0	0
34	54.000	7.000	0	0	0
35	58.000	7.000	0	0	0
36	66.000	7.000	0	0	0
37	74 000	7 000	0	0	0
38	82.000	7.000	0	0	0
39	90.000	7 000	1	0	1
40	.000	10.000	1	0	1
41	10 000	10 000	0	0	0
42	20.000	10.000	0	0	0
43	30.000	10.000	0	0	0
44	36.000	10.000	0	0	0
45	42 000	10 000	0	0	0
46	50.000	10.000	0	0	0
47	54.000	10.000	0	0	0
48	58.000	10.000	0	0	0
49	66 000	10 000	0	0	0
50	74.000	10.000	0	0	0
51	82.000	10.000	0	0	0
52	90.000	10.000	1	0	1
53	36 000	11.500	0	0	0
54	42.000	11.500	0	0	0
55	50 000	11.500	0	0	0
56	54.000	11.500	0	0	0
57	58 000	11 500	0	0	0
58	66.000	11.500	0	0	0
59	74.000	11.500	0	0	0
60	82.000	11.500	0	0	0
61	90.000	11.500	1	0	1
62	42.000	13.000	0	0	0
63	50.000	13.000	0	0	0
64	54.000	13.000	0	0	0
65	58.000	13.000	0	0	0
66	66.000	13.000	0	0	0
67	74 000	13 000	0	0	0
68	82.000	13.000	0	0	0
69	90.000	13 000	1	0	1
70	46.000	14.000	0	0	0
71	50 000	14 000	0	0	0
72	54.000	14.000	0	0	0
73	58.000	14.000	0	0	0
74	66.000	14.000	0	0	0
75	74 000	14 000	0	0	0
76	82.000	14.000	0	0	0
77	90.000	14.000	1	0	1
78	50.000	15.000	0	0	0
79	54 000	15.000	0	0	0
80	58 000	15.000	0	0	0
81	66 000	15.000	0	0	0
82	74 000	15.000	0	0	0
83	82 000	15 000	0	0	0
84	90.000	15.000	1	0	1
85	54.000	16.000	0	0	0
86	58.000	16.000	0	0	0
87	66 000	16 000	0	0	0
88	74.000	16.000	0	0	0
89	82.000	16.000	0	0	0
90	90.000	16 000	1	0	1
91	58 000	17 000	0	0	0
92	66 000	17 000	0	0	0
93	74 000	17.000	0	0	0
94	82 000	17 000	0	0	0
95	90 000	17 000	1	0	1

STRUCTURAL ELEMENTS - LINEAR ELASTIC

BAR ELEMENTS-------

MATERIAL NUMBER	E	AREA	WEIGHT/LENGTH
1	80.	1.00	0.

ELMT NO.	CONNECTED NODES I	J	MATL NO.
1	43	44	1
2	44	45	1
3	45	46	1
4	46	47	1
5	47	48	1
6	48	49	1
7	49	50	1
8	50	51	1
9	51	52	1

SOIL MATEPIAL PROPERTY DATA

MATL	UNIT WT	YOUNG'S MODULUS CONSTANT	EXPONENT	RATIO	BULK MODULUS CONSTANT	EXPONENT	STRENGTH PARAMETERS C	PHI	DPHI	KO
1	.0680	6000.00	.500	.500	1500.00	.600	.00	35.00	.00	.50
2	053C	40 00	300	900	20 00	200	05	00	00	50
3	.0600	1000 00	.400	.700	500.00	.500	.50	40.00	.00	.50

FOUR NODES SOLID ELEMENT DATA

ELET NO	CONNECTED NODES I	J	K	L	MATL NO	ELEMENT CENTER COORDINATES X-ORD	Y-ORD
1	1	2	15	14	3	5.000	2.000
2	2	3	16	15	3	15 000	2.000
3	3	4	17	16	3	25 000	2 000
4	4	5	18	17	2	33.000	2.000
5	5	6	19	18	2	39.000	2.000
6	6	7	20	19	2	46.000	2 000
7	7	8	21	20	2	52 000	2 000
8	8	9	22	21	2	56.000	2.000
9	9	10	23	22	3	62.000	2.000
10	10	11	24	23	3	70.000	[illegible].000
11	11	12	25	24	3	78 00	2 000
12	12	13	26	25	3	86.000	2.000
13	14	15	28	27	3	5.000	5.500
14	15	16	29	28	3	15.000	5.500
15	16	17	30	29	2	25 000	5 500
16	17	18	31	30	2	33.000	5.500
17	18	19	32	31	2	39.000	5.500
18	19	20	33	32	2	46.000	5.500
19	20	21	34	33	2	52.000	5.500
20	21	22	35	34	2	56.000	5.500
21	22	23	36	35	2	62.000	5.500
22	23	24	37	36	3	70.000	5.500
23	24	25	38	37	3	78.000	5.500
24	25	26	39	38	3	86.000	5.500
25	27	28	41	40	3	5 000	8 500
26	28	29	42	41	2	15.000	8 500
27	29	30	43	42	2	25.000	8.500
28	30	31	44	43	2	33.000	8.500
29	31	32	45	44	2	39.000	8 500
30	32	33	46	45	2	46.000	8.500
31	33	34	47	46	2	52.000	8.500
32	34	35	48	47	2	56.000	8.500
33	35	36	49	48	2	62 000	8 500
34	36	37	50	49	2	70.000	8.500
35	37	38	51	50	3	78.000	8.500
36	38	39	52	51	3	86.000	8.500
37	43	44	53	53	1	34.500	10 750
38	44	45	54	53	1	39.000	10.750
39	45	46	55	54	1	46.000	10.750
40	46	47	56	55	1	52.000	10.750
41	47	48	57	56	1	56 000	10 750
42	48	49	58	57	1	62.000	10.750
43	49	50	59	58	1	70.000	10.750
44	50	51	60	59	1	78.000	10.750
45	51	52	61	60	1	86 000	10 750
46	53	54	62	62	1	40 500	12.250
47	54	55	63	62	1	46 000	12.250
48	55	56	64	63	1	52 000	12 250
49	56	57	65	64	1	56 000	12 250
50	57	58	66	65	1	62.000	12.250
51	58	59	67	66	1	70.000	12.250
52	59	60	68	67	1	78.000	12 250
53	60	61	69	68	1	86.000	12 250
54	62	63	71	70	1	47.000	13.500
55	63	64	72	71	1	52.000	13 500
56	64	65	73	72	1	56.000	13 500
57	65	66	74	73	1	62 000	13 500
58	66	67	75	74	1	70.000	13.500
59	67	68	76	75	1	78 000	13 500
60	68	69	77	76	1	86.000	13.500
61	70	71	78	77	1	49 000	14 500
62	71	72	79	78	1	52 000	14 500
63	72	73	80	79	1	56.000	14 500
64	73	74	81	80	1	62.000	14 500
65	74	75	82	81	1	70 000	14 500
66	75	76	83	82	1	78.000	14 500
67	76	77	84	83	1	86.000	14 500
68	78	79	85	85	1	53.000	15 500
69	79	80	86	85	1	58 000	15.500
70	80	81	87	86	1	62.000	15 500
71	81	82	88	87	1	70 000	15 500
72	82	83	89	88	1	78.000	15.500
73	83	84	90	89	1	86 000	15 500
74	85	86	91	91	1	57 000	16 500
75	86	87	92	91	1	62 000	16 500
76	87	88	93	92	1	70 000	16 500
77	88	89	94	93	1	78.000	16 500
78	89	90	95	94	1	86.000	16 500

CONSTRUCTION LAYER INFORMATION

```
SSTIPN- 1 LAYER OF GEOTEXTILE, P=2000 PFI, T=1000

**************************************************
**************************************************
*                                                *
*  LOAD CASE -----------------------------  2    *
*                                                *
**************************************************
**************************************************

LARGEST ELE  NO  IN THIS INCREMENT   78

LARGEST N P  NO  IN THIS INCREMENT   95

BAND WIDTH-----------------------  40
TOTAL NUMBER OF EQUATIONS--------- 222
NUMBER OF EQUATIONS IN BLOCK------  84
NUMBER OF BLOCKS-----------------   3
NUMBER OF N.P  FORCE CARDS-------   3
NUMBER OF PRESSURE CARDS---------   0
```

NODAL POINT FORCES (WEIGHTS OF ADDED ELEMENTS)

NP	X-FORCE	Y-FORCE
1	0.	0.
2	0	0
3	0.	0
4	0.	0.
5	0.	0
6	0	0
7	0	0
8	0	0.
9	0.	0.
10	0	0
11	0.	0.
12	0.	0.
13	0.	0.
14	0	0
15	0.	0.
16	0.	0.
17	0.	0.
18	0	0
19	0.	0.
20	0.	0.
21	0.	0.
22	0	0
23	0	0.
24	0.	0.
25	0.	0.
26	0	0
27	0.	0.
28	0.	0.
29	0	0
30	0	0
31	0.	0.
32	0.	0.
33	0.	0
34	0	0
35	0.	0.
36	0.	0.
37	0.	0
38	0	0
39	0	0.
40	0	0.
41	0.	0.
42	0	0
43	0.	0.
44	0	0.
45	0	0
46	0	0
47	0.	0
48	0.	0.
49	0.	0.
50	0	0
51	0.	0.
52	0.	0.
53	0.	0.
54	0	0
55	0.	0
56	0	0.
57	0	0.
58	0	0
59	0.	0.
60	0	0.
61	0	0
62	0.	0
63	0.	0.
64	0.	0.
65	0.	0
66	0.	0.
67	0.	0.
68	0	0
69	0.	0.
70	0	0
71	0.	0
72	0	0
73	0.	0.
74	0.	0.
75	0.	0.
76	0	0
77	0.	0
78	0	0
79	0	0.
80	0	0
81	0	0.
82	0.	0
83	0	0
84	0	0
85	0.	0
86	0.	0.
87	0.	0.
88	0	0
89	0	0.
90	0	0.
91	0.	0.
92	0	-4.50
93	0	-4.50
94	0	-2.00
95	0.	0

LOAD CASE : 2 ITERATION : 2

NP	DELTA-X	DELTA-Y	DELTA-ZZ	X-DISP	Y-DISP	ZZ-ROTAT	TOTAL	NP
1	.0000	.0000	.0000	.0000	.0000	.0000	.0000	1
2	.0000	.0000	.0000	.0000	.0000	.0000	.0000	2
3	.0000	.0000	.0000	.0000	.0000	.0000	.0000	3
4	0000	.0000	0000	0000	0000	0000	0000	4
5	.0000	0000	.0000	0000	.0000	0000	.0000	5
6	.0000	.0000	.0000	0000	.0000	.0000	.0000	6
7	.0000	.0000	.0000	0000	.0000	.0000	.0000	7
8	0000	0000	0000	0000	0000	0000	0000	8
9	.0000	.0000	.0000	.0000	.0000	.0000	.0000	9
10	.0000	.0000	.0000	.0000	.0000	.0000	.0000	10
11	.0000	.0000	.0000	.0000	.0000	.0000	.0000	11
12	0000	.0000	0000	0000	0000	0000	0000	12
13	.0000	.0000	0000	.0000	.0000	.0000	.0000	13
14	.0000	.0000	.0000	.0000	.0000	.0000	.0000	14
15	.0000	.0000	.0000	-.0003	-.0001	.0000	.0003	15
16	0000	- 0001	0000	- 0007	- 0007	0000	0010	16
17	-.0005	.0001	.0000	-.0058	.0027	.0000	.0062	17
18	-.0128	.0010	.0000	-.2357	.0501	.0000	.2409	18
19	-.0146	-.0034	.0000	-.3349	-.0724	0000	.3426	19
20	- 0080	- 0042	0000	- 1882	- 1389	0000	2335	20
21	-.0081	.0001	.0000	-.0721	-.1415	0000	.1588	21
22	.0002	.0010	.0000	.0002	-.0040	.0000	.0040	22
23	-.0013	-.0029	.0000	-.0009	-.0081	.0000	.0082	23
24	0009	- 0057	0000	0009	- 0107	0000	0107	24
25	.0021	-.0020	.0000	.0021	-.0063	.0000	.0058	25
26	.0000	.0008	.0000	.0000	-.0018	.0000	0018	26
27	.0000	.0000	.0000	.0000	.0002	0000	.0002	27
28	.0000	0000	0000	0000	- 0004	0000	0004	28
29	-.0001	.0000	.0000	-.0026	.0002	.0000	.0026	29
30	- 0293	.0088	.0000	-.3311	.0874	.0000	.3424	30
31	-.C478	.0034	.0000	-.4596	0905	.0000	.4684	31
32	- 0519	- 0084	0000	- 4889	- 1380	0000	5056	32
33	-.0470	-.0082	.0000	-.3719	-.2780	.0000	.4649	33
34	-.0587	.0125	.0000	-.3029	-.2441	.0000	.3890	34
35	-.0793	-.0103	.0000	-.2251	-.1685	.0000	.2312	35
36	-.0030	- 0074	0000	- 0017	- 0185	0000	0186	36
37	.0018	-.0110	.0000	0014	-.0184	0000	.0184	37
38	.0025	- 0037	.0000	.0013	-.0109	.0000	.0110	38
39	.0000	0020	.0000	.0000	-.0027	.0000	.0027	39
40	0000	0000	0000	0000	0002	0000	0002	40
41	.0000	.0000	.0000	.0002	-.0004	.0000	.0004	41
42	-.0227	.0082	.0000	-.1811	.0812	0000	1804	42
43	-.0525	.0141	.0000	-.4323	1513	.0000	.4580	43
44	- 0534	.0033	.0000	- 4261	0728	0000	4323	44
45	-.0538	-.0093	.0000	-.3981	-.1982	.0000	4447	45
46	-.0517	-.0112	.0000	-.3373	- 3893	.0000	5151	46
47	- 0483	.0183	.0000	-.2881	-.3407	0000	4449	47
48	- 0509	0124	0000	- 2398	- 2880	0000	3582	48
49	-.0347	-.1148	.0000	-.1188	-.2824	.0000	.2880	49
50	-.0005	-.0288	.0000	-.0280	-.0462	.0000	.0530	50
51	-.0001	-.0030	.0000	- 0133	-.0159	.0000	.0207	51
52	0000	0028	0000	0000	- 0782	0000	0752	52
53	-.0803	0035	.0000	- 5881	.1318	.0000	.8038	53
54	-.0514	-.0091	.0000	-.5048	-.1595	0000	.5294	54
55	-.0551	-.0115	.0000	-.3058	-.3830	.0000	.4748	55
56	- 0543	0187	0000	- 2575	- 3535	0000	4374	56
57	- 0338	.0108	.0000	-.1752	-.2907	.0000	.3394	57
58	-.0088	-.1185	.0000	- 0586	-.2984	.0000	.3041	58
59	-.0045	-.0304	.0000	.0458	-.0973	.0000	.1078	59
60	-.0029	-.0028	.0000	.0104	-.0124	.0000	.0182	60
61	.0000	.0028	.0000	.0000	- 0737	0000	.0737	61
62	-.0484	-.0088	.0000	-.1288	-.0241	0000	1291	62
63	-.0781	-.0119	0000	- 1534	- 1870	0000	.2268	63
64	-.0847	.0184	.0000	-.1594	- 1782	.0000	2378	64
65	-.1063	.0272	.0000	-.1792	-.1782	.0000	.2507	65
66	- 0228	- 1219	0000	- 0729	- 2238	0000	2354	66
67	-.0148	-.0328	.0000	-.0785	- 1200	.0000	1434	67
68	-.0060	-.0030	.0000	-.0153	-.0363	0000	.0394	68
69	.0000	.0027	.0000	.0000	-.0292	.0000	.0292	69
70	- 1053	- 0087	0000	- 1625	- 0581	0000	1728	70
71	-.1187	- 0113	.0000	-.1777	-.1180	.0000	.2133	71
72	-.1242	.0211	.0000	-.1841	-.1182	.0000	.2188	72
73	-.1357	.0319	.0000	-.1988	-.1195	0000	.2300	73
74	- 0353	- 1231	0000	- 0879	- 2039	0000	2220	74
75	-.0218	-.0333	.0000	- 0449	-.1388	0000	1457	75
76	-.0080	-.0034	.0000	- 0098	-.0089	.0000	.0132	76
77	.0000	0023	.0000	.0000	-.0028	.0000	0028	77
78	- 1288	- 0108	0000	- 1608	- 0737	0000	1769	78
79	-.1307	.0218	.0000	- 1637	-.0828	.0000	.1763	79
80	-.1401	.0383	.0000	- 1749	-.0588	.0000	.1848	80
81	-.8142	-.3121	.0000	- 6517	-.3886	0000	.7477	81
82	5587	- 2828	0000	5218	- 3512	0000	6288	82
83	1.0717	- 0438	.0000	1.0702	-.0477	0000	1 0712	83
84	0000	1178	.0000	.0000	.1143	0000	1143	84
85	-.1410	.0222	.0000	-.1529	0004	.0000	.1529	85
86	- 7023	.1848	0000	- 7154	1574	0000	7328	86
87	-.7041	-.5883	.0000	-.7175	-.5957	.0000	.9326	87
88	.5744	-.5799	0000	5303	-.6325	0000	.8254	88
89	1.4881	-.0887	0000	1.4773	-.0878	.0000	1 4799	89
90	0000	3838	0000	0000	3451	0000	3451	90
91	-.6081	.1872	.0000	- 6081	.1872	.0000	.6362	91
92	-.6093	-.5730	0000	-.6093	-.5730	.0000	.8364	92
93	.3907	-.9831	0000	3907	-.9831	.0000	1 0578	93
94	1 5448	- 0867	0000	1 5446	-.0867	0000	1 5470	94
95	.0000	.6619	.0000	0000	.6619	.0000	.6618	95

STRUCTURAL ELEMENTS - LINEAR ELASTIC

BAR ELEMENTS--INTERNAL MEMBER FORCES

ELEMENT NO.	AXIAL FORCE
INCREMENTAL VALUES	
1	- 0091
2	- 0038
3	0158
4	0807
5	- 0883
6	1218
7	2561
8	0036
9	0005
TOTAL VALUES	
1	0818
2	2700
3	4838
4	7887
5	6953
1	9071
7	6961

8 .0558
9 .0595

FOUR NODE SOLID ELEMENTS - MODULI AND STRAINS (STRAINS IN PERCENT)

ELE	ELAS MOD	BULK MOD	SHEAR MOD	POIS	EPS-X	EPS-Y	GAM-XY	EPS-1	EPS-3	GAMMAX	ELE
1	528 7	332 8	228 1	158	001	001	004	003	- 001	004	1
2	524.6	335.2	225 4	164	002	010	.015	.014	-.003	017	2
3	498.3	314.8	215 1	.158	.025	- 025	.082	.040	-.039	.079	3
4	7	17.3	2	.494	1.917	- 659	2 621	2.467	-1.209	3.676	4
5	6	17 0	2	494	827	279	8 153	4 639	-3 532	8 171	5
6	7	17.8	.2	.494	- 611	2.616	6.864	4 751	-3.046	7 797	6
7	.7	18.4	.2	493	-1.463	3 480	3 324	3.987	-1.970	5.958	7
8	.6	18.8	2	494	-.903	1 818	-.819	1.879	-.964	2.842	8
9	482 7	342 5	189 0	224	006	128	022	127	005	122	9
10	477.0	367.9	192.6	.238	-.011	.210	.028	.211	-.012	.223	10
11	474 7	371.4	191.0	.243	-.007	.202	-.070	.208	- 013	.220	11
12	500.8	352.9	207.6	.208	.013	.081	- 048	.088	006	082	12
13	442 5	281 0	197 2	122	002	.003	- 001	003	001	001	13
14	460.9	271.2	205.6	.121	.018	- 010	.029	021	- 017	038	14
15	2.2	14 0	.7	.473	1.867	-1 427	5.004	3 062	-2.822	5.884	15
16	2.8	15 7	.9	.470	2.988	-2 085	8.738	5.502	-4.599	10 102	16
17	9	16 5	3	491	1 055	387	9 174	5 320	-3 878	9 198	17
18	.8	17 1	.2	494	-1 630	3 428	6.876	5.167	-3.369	8 536	18
19	.6	17.0	.2	494	-2.328	4.078	6.513	5.443	-3.691	9 134	19
20	.7	18.2	.2	494	-1.675	4.463	4.937	5.302	-2.724	8.026	20
21	6	17 1	2	494	-1 390	2 916	2.832	3 340	-1 814	5 154	21
22	432.8	361 7	172.6	.255	-.030	318	062	320	-.032	352	22
23	408 9	309.8	165.9	232	-.006	239	- 081	241	- 013	255	23
24	412.5	278.1	173 7	.188	.021	104	-.082	114	011	103	24
25	408 9	229 7	187 1	093	- 001	000	002	001	- 001	002	25
26	.0	1	0	495	.615	-1 349	2.227	1.290	-1.819	3 108	26
27	4	13.4	1	.494	2.998	-2 415	3.541	3.528	-2.943	6 489	27
28	2.3	13.8	.8	471	1 019	- 771	1 757	1.378	-1 131	2 509	28
29	12 9	16.0	4 8	350	003	1 297	2.107	1 886	- 586	2 472	29
30	.5	15.0	2	494	-1.106	2 642	.066	2.642	-1.106	3.646	30
31	6	15.7	2	.494	-1 601	3 450	-1.900	3.626	-1 677	5 303	31
32	6	15.5	2	494	-1 551	3 236	-1.913	3 420	-1 735	5 155	32
33	7	17 8	2	494	-2 153	5 723	1 224	5 770	-2 200	7 970	33
34	7	17 3	2	.494	- 589	4.545	1.077	4.601	-.655	5.256	34
35	310 4	275 9	121 2	280	-.079	531	.457	607	- 155	762	35
36	380.8	220 0	168 1	141	- 075	1 343	581	1 400	- 132	1 532	36
37	11.9	398 6	4 0	495	083	241	17 481	8 893	-8 588	17 481	37
38	283.9	434 2	106 7	377	- 603	2 039	19 311	10 674	-9 438	20 113	38
39	436 5	453 9	165 7	317	-1.521	3 896	10.481	7 086	-4 711	11 798	39
40	199 3	422 1	70 3	417	-1.141	4 821	2 058	4 994	-1 314	6 307	40
41	177 5	419 4	62 2	426	-1 498	5 289	- 465	5 277	-1 506	6 783	41
42	242 4	427 5	86.8	399	-1.364	4 292	-.839	4 323	-1.395	5 717	42
43	11 9	398 8	4.0	495	-1 130	3 733	-4 989	4 785	-2.182	6 966	43
44	894.8	614 5	271 6	279	207	1 883	-2 870	2 707	- 617	3 322	44
45	1492 0	874.9	666 7	119	048	005	320	187	- 136	322	45
46	120.8	412.5	41 7	450	- 047	046	063	061	- 063	124	46
47	1	4 0	0	495	145	077	1.115	670	- 447	1 117	47
48	66 7	406.2	22 6	472	164	400	416	521	043	478	48
49	1	4 0	0	495	- 437	578	2 785	1 544	-1 402	2 946	49
50	1	4 0	.0	495	-1 077	481	4 485	2 087	-2 673	4 760	50
51	501 7	483.4	194 4	290	- 093	2 752	1 702	2 987	- 329	3 316	51
52	637 8	586.1	250 1	275	- 456	3 439	1 755	3 628	- 645	4 273	52
53	849 1	547 9	363 4	168	- 123	1 809	294	1 820	- 134	1 954	53
54	1	4 0	0	495	344	- 234	4 611	2 477	-2 366	4 845	54
55	11 9	398.8	4.0	495	133	- 143	3.649	1 825	-1 835	3 660	55
56	11 9	398 8	4 0	495	365	- 318	3 473	1 805	-1 739	3 544	56
57	1	4 0	0	495	-1 346	030	4 033	1 472	-2 789	4 281	57
58	1324 2	778 7	590 8	121	- 458	2 914	1 155	3 010	- 552	3 562	58
59	1473 0	828 5	673 5	094	- 352	2 755	- 381	2 765	- 362	3 127	59
60	448 9	455 8	171 5	312	- 108	097	040	099	- 110	209	60
61	1	4 0	0	495	354	- 081	1 421	887	- 583	1 480	61

62	222.1	424.9	78.9	.407	104	-.045	.059	.109	-.051	.160	62
63	241.2	427.4	66.2	.399	.264	-.271	.256	.296	-.253	.549	63
64	.1	4.0	.0	.495	2.301	9.287	32.233	22.291	-10.892	32.983	64
65	.1	4.0	.0	.495	-7.522	23.631	.987	23.839	-7.530	31 168	65
66	.1	4.0	.0	.495	-3.574	16.172	-83.960	49.424	-38.626	86.250	66
67	1	4 0	0	495	6 630	-3 718	-55 023	29 460	-26 536	55 986	67
68	180.5	421.0	67.0	.420	.062	-.051	.242	.132	-.131	.263	68
69	1	4.0	.0	.495	7.143	-7.443	26.446	14 951	-15.251	30.201	69
70	.1	4.0	.0	.495	2.975	5.447	39.489	23.994	-15.572	39 566	70
71	1	4 0	0	495	-15 049	29 787	4 581	29 904	-15 166	45 070	71
72	.1	4 0	.0	.496	-9.263	19.031	-25.156	23.612	-14.064	37 676	72
73	.1	4.0	.0	.495	15.927	-9.346	-24.035	20.729	-14.148	34.877	73
74	.1	4.0	.0	495	14 033	-.256	-13.489	16.713	-2.936	19.649	74
75	522 3	486 5	203 8	282	019	057	008	058	019	039	75
76	.1	4.0	.0	.495	-14.240	20.341	7.072	20.699	-14.598	35.297	76
77	.1	4.0	.0	.495	-12.910	21.158	-2.549	21.205	-12.958	34 163	77
78	.1	4.0	.0	.495	18.942	-13.414	-10.229	19.731	-14.203	33.934	78

FOUR NODE SOLID ELEMENTS - STRESSES

ELE	SIG-X	SIG-Y	TAU-XY	SIG-1	SIG-3	TAU-MAX	THETA	SIG1/SIG3	LEVEL	ELE
1	.249	486	.009	486	.249	.119	2.253	1 955	.078	1
2	261	536	034	541	256	142	7 015	2 110	093	2
3	.355	366	.142	.502	.218	142	43.834	2.301	057	3
4	.390	.559	.005	560	.390	085	' 795	:.435	1.637	4
5	.359	.537	.017	.538	.358	.090	6 287	1.504	1.205	5
6	455	650	015	651	454	098	4 347	1 433	1 968	6
7	.508	709	.007	.710	.508	.101	2.094	1.397	2.017	7
8	.320	.511	-.002	511	.320	.095	-.470	1.597	1.910	8
9	.365	1 021	.038	1.023	.363	.330	3.327	2.822	192	9
10	423	1 483	054	1.486	420	533	2.918	3.536	291	10
11	.435	1 439	- 135	1.457	.417	.520	-7.500	3.490	285	11
12	.353	.850	- 100	.870	334	268	-10.950	2.603	.180	12
13	.144	263	-.002	.263	144	.059	- 915	1 862	052	13
14	157	231	058	275	154	060	36 824	1 786	045	14
15	.135	197	.026	.208	129	.039	20 714	1 596	.772	15
16	.250	282	.042	.311	221	045	34.379	1 403	892	16
17	.308	.396	.019	.400	304	.048	12.018	1.314	.958	17
18	356	465	014	468	354	056	7 195	1 318	1 125	18
19	.346	459	.013	.461	.344	.059	6.456	1.341	1.171	19
20	.491	.606	.011	.607	.489	.059	5.588	1.241	1.160	20
21	.310	.418	.006	.419	.310	.054	3.126	1.350	1.085	21
22	363	1 714	090	1 720	357	681	3 814	4 817	397	22
23	.316	1 229	-.135	1.248	298	.476	-6.215	4 217	297	23
24	.257	607	-.107	.637	227	205	-15.730	2.801	138	24
25	.042	091	.003	.091	.042	025	3.485	2 171	021	25
26	009	- 003	007	012	- 006	009	65 131	-1 872	-1 000	26
27	.161	023	.040	.162	.012	075	73.933	13 661	1.604	27
28	.098	.025	-.003	.098	.025	037	-87.804	4.008	738	28
29	.166	198	026	.213	151	.031	29.059	1 409	618	29
30	186	309	- 004	309	186	062	-1 702	1 667	1 237	30
31	227	332	-.006	.333	.227	.053	-3.239	1.468	1 062	31
32	183	.292	-.013	.293	.182	.056	-6.492	1.614	1 116	32
33	.500	.619	001	.619	500	.059	.698	1.237	1 187	33
34	575	676	005	676	575	051	2 588	1 176	1 010	34
35	.483	1 774	-.041	1 775	481	647	-1.825	3.686	334	35
36	.056	.228	-.009	.229	.056	086	-3.138	4.095	.074	36
37	.033	.080	-.053	.102	-.008	.055	-37 852	-12.858	-1.000	37
38	062	119	044	143	038	053	28 536	3 803	1 042	38
39	.113	.303	.129	.368	.047	.160	26.850	7.803	2 529	39
40	-.129	.340	-.168	.394	- 183	.288	-17.805	-2.154	-1.000	40
41	-.526	.150	-.160	.186	-.562	.374	-12.657	-.331	-1.000	41
42	-.867	.557	.071	.561	-.871	.816	3.281	- 637	-1.000	42
43	.108	.709	-.182	.750	.067	.342	-16 167	11 240	3.807	43
44	.374	1.527	-.135	1 543	.359	.592	-6.582	4.300	1.227	44
45	.030	.286	.364	.563	-.247	.408	35.784	-2.274	-1.000	45
46	.028	016	008	.032	012	010	64.438	2.632	807	46
47	.024	151	107	208	-.033	.120	29.134	-6.350	-1 000	47
48	169	323	297	562	- 061	307	37 735	-9 085	-1 000	48
49	-.006	.297	-.073	.313	-.022	.168	-12.608	-14.004	-1.000	49
50	-.019	210	-.084	.227	- 036	131	-14.508	-6.387	-1.000	50
51	.019	1 170	-.577	1.410	-.220	815	-22.548	-6.397	: 000	51
52	- 209	874	281	943	- 277	610	13 683	-3 397	-1 000	52
53	-.402	330	166	.366	- 438	.402	12.160	- 634	-1.000	53
54	.035	.088	.115	.187	-.065	116	40.850	-2.581	-1.000	54
55	-.069	.083	175	198	- 184	.191	33.288	-1.077	-1.000	55
56	088	493	111	521	060	231	14 342	6 740	2 877	56
57	-.074	.115	- 063	133	- 093	113	-16.749	-1 433	-1 000	57
58	-1.734	1 111	- 778	1.309	-1 932	1.621	-14.204	- 678	-1.000	58
59	-2.112	701	621	.832	-2 243	1.537	11 907	-.371	-1 000	59
60	-.342	274	061	280	- 348	314	5 800	- 804	-1 000	60
61	021	025	.007	.031	016	.006	36.466	1.955	355	61
62	.436	159	'34	490	104	.193	68.009	4 689	1 371	62
63	772	- 273	.356	.882	- 383	632	72.849	-2 303	-1,000	63
64	569	682	- 113	737	494	122	-33 639	1 493	183	64
65	.647	.689	.000	.689	.647	021	528	1.065	.024	65
66	.511	.544	-.023	.565	490	037	-31.987	1.152	.058	66
67	.236	.318	- 021	.323	.230	046	-13.808	1 400	149	67
68	091	- 048	182	216	- 174	195	55 462	-1.246	-1 000	68
69	074	.045	.065	146	- 027	087	49.667	-5.367	-1 000	69
70	.363	451	- 023	457	.358	050	-13.690	1 278	103	70
71	587	639	002	639	587	026	1 981	1 090	034	71
72	394	434	- 010	436	392	022	-13 439	1 113	042	72
73	289	286	- 010	298	278	010	-49 667	1 070	026	73
74	.563	561	- 003	566	558	004	-56 780	1 013	005	74
75	294	468	017	468	292	088	5 470	1 600	223	75
76	.246	291	003	291	246	022	3 605	1 182	068	76
77	.332	.376	- 001	.376	332	022	-1 317	1 133	049	77
78	.250	.241	- 004	252	240	006	-68.583	1 050	019	78

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SSTIPN. 1 LAYER OF GEOTEXTILE, P=2000 PPI, EXTENDED, T=1000

TOTAL NUMBER OF NODES------------------ 95
NUMBER OF BAR ELEMENTS----------------- 11
NUMBER OF DIFF  BAR MATERIALS----------  1
NUMBER OF BEAM ELEMENTS----------------  0
NUMBER OF DIFF  BEAM MATERIALS---------  0
NUMBER OF NODAL LINKS -----------------  0
NUMBER OF INTERFACE ELEMENTS-----------  0
NO  OF INTERFACE ELE  IN PREEXIST  PART  0
NUMBER OF INTERFACE ELE  IN FOUNDATION-  0
NUMBER OF INTERFACE MATERIALS----------  0
TOTAL NUMBER OF SOIL ELEMENTS---------- 78
NUMBER OF DIFF  SOIL MATERIALS---------  3
NUMBER OF ELEMENTS IN FOUNDATION------- 36
NUMBER OF NODES IN FOUNDATION---------- 52
NUMBER OF PREEXISTING ELEMENTS---------  0
NUMBER OF PREEXISTING NODES------------  0
NUMBER OF CONSTRUCTION LAYERS----------  6
NUMBER OF LOAD CASES-------------------  2

CALING FACTOR ----------      1 00000

ATMOSPHERIC PRESSURE ---       1 05800

UNIT WEIGHT OF WATER ---        .03120


OMPUTATION SEQUENCE FOR A TOTAL OF     8  INCREMENTS
-----------------------------------------------------

 INCREMENT NO.  1     APPLY LOAD CASE   1

 INCREMENT NO.  2     PUT ON LAYER NO   1

 INCREMENT NO.  3     PUT ON LAYER NO   2

 INCREMENT NO   4     PUT ON LAYER NO   3

 INCREMENT NO   5     PUT ON LAYER NO   4

 INCREMENT NO   6     PUT ON LAYER NO   5

 INCREMENT NO   7     PUT ON LAYER NO   6

 INCREMENT NO   8     APPLY LOAD CASE   2
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NODAL POINT INPUT DATA

NODE NUMBER	NODAL POINT COORDINATES X-ORD	Y-ORD	B.C CODE X	Y	ZZ
1	.000	.000	1	1	1
2	10.000	.000	1	1	1
3	20.000	.000	1	1	1
4	30.000	.000	1	1	1
5	38.000	.000	1	1	1
6	42.000	.000	1	1	1
7	50.000	.000	1	1	1
8	54.000	.000	1	1	1
9	58.000	.000	1	1	1
10	66.000	.000	1	1	1
11	74.000	.000	1	1	1
12	82.000	.000	1	1	1
13	90.000	.000	1	1	1
14	.000	4.000	1	0	1
15	10.000	4.000	0	0	0
16	20.000	4.000	0	0	0
17	30.000	4.000	0	0	0
18	38.000	4.000	0	0	0
19	42.000	4.000	0	0	0
20	50.000	4.000	0	0	0
21	54.000	4.000	0	0	0
22	58.000	4.000	0	0	0
23	66.000	4.000	0	0	0
24	74.000	4.000	0	0	0
25	82.000	4.000	0	0	0
26	90.000	4.000	1	0	1
27	.000	7.000	1	0	1
28	10.000	7.000	0	0	0
29	20.000	7.000	0	0	0
30	30.000	7.000	0	0	0
31	38.000	7.000	0	0	0
32	42.000	7.000	0	0	0
33	50.000	7.000	0	0	0
34	54.000	7.000	0	0	0
35	58.000	7.000	0	0	0
36	66.000	7.000	0	0	0
37	74.000	7.000	0	0	0
38	82.000	7.000	0	0	0
39	90.000	7.000	1	0	1
40	.000	10.000	1	0	1
41	10.000	10.000	0	0	0
42	20.000	10.000	0	0	0
43	30.000	10.000	0	0	0
44	38.000	10.000	0	0	0
45	42.000	10.000	0	0	0
46	50.000	10.000	0	0	0
47	54.000	10.000	0	0	0
48	58.000	10.000	0	0	0
49	66.000	10.000	0	0	0
50	74.000	10.000	0	0	0
51	82.000	10.000	0	0	0
52	90.000	10.000	1	0	1
53	38.000	11.500	0	0	0
54	42.000	11.500	0	0	0
55	50.000	11.500	0	0	0
56	54.000	11.500	0	0	0
57	58.000	11.500	0	0	0
58	66.000	11.500	0	0	0
59	74.000	11.500	0	0	0
60	82.000	11.500	0	0	0
61	90.000	11.500	1	0	1
62	42.000	13.000	0	0	0
63	50.000	13.000	0	0	0
64	54.000	13.000	0	0	0
65	58.000	13.000	0	0	0
66	66.000	13.000	0	0	0
67	74.000	13.000	0	0	0
68	82.000	13.000	0	0	0
69	90.000	13.000	1	0	1
70	46.000	14.000	0	0	0
71	50.000	14.000	0	0	0
72	54.000	14.000	0	0	0
73	58.000	14.000	0	0	0
74	66.000	14.000	0	0	0
75	74.000	14.000	0	0	0
76	82.000	14.000	0	0	0
77	90.000	14.000	1	0	1
78	50.000	15.000	0	0	0
79	54.000	15.000	0	0	0
80	58.000	15.000	0	0	0
81	66.000	15.000	0	0	0
82	74.000	15.000	0	0	0
83	82.000	15.000	0	0	0
84	90.000	15.000	1	0	1
85	54.000	16.000	0	0	0
86	58.000	16.000	0	0	0
87	66.000	16.000	0	0	0
88	74.000	16.000	0	0	0
89	82.000	16.000	0	0	0
90	90.000	16.000	1	0	1
91	58.000	17.000	0	0	0
92	66.000	17.000	0	0	0
93	74.000	17.000	0	0	0
94	82.000	17.000	0	0	0
95	90.000	17.000	1	0	1

BAR ELEMENTS-------

MATERIAL NUMBER	E	AREA	WEIGHT/LENGTH
1	80	1.00	0

ELMT NO.	CONNECTED NODES I	CONNECTED NODES J	MATL NO
1	41	42	1
2	42	43	1
3	43	44	1
4	44	45	1
5	45	46	1
6	46	47	1
7	47	48	1
8	48	49	1
9	49	50	1
10	50	51	1
11	51	52	1

SOIL MATERIAL PROPERTY DATA

MATL	UNIT WT	YOUNG'S MODULUS CONSTANT	YOUNG'S MODULUS EXPONENT	RATIO	BULK MODULUS CONSTANT	BULK MODULUS EXPONENT	STRENGTH PARAMETERS C	STRENGTH PARAMETERS PHI	STRENGTH PARAMETERS DPHI	KO
1	0880	8000.00	500	500	1500.00	.600	00	35.00	00	50
2	0530	40.00	300	900	20.00	200	.05	00	00	.50
3	0800	1000.00	400	700	500.00	500	.50	40.00	00	50

FOUR NODES SOLID ELEMENT DATA

ELET NO	CONNECTED NODES I	J	K	L	MATL NO	ELEMENT CENTER COORDINATES X-ORD	Y-ORD
1	1	2	15	14	3	5.000	2.000
2	2	3	16	15	3	15.000	2.000
3	3	4	17	16	3	25.000	2.000
4	4	5	18	17	2	33.000	2.000
5	5	6	19	18	2	39.000	2.000
6	6	7	20	19	2	46.000	2.000
7	7	8	21	20	2	52.000	2.000
8	8	9	22	21	2	58.000	2.000
9	9	10	23	22	3	62.000	2.000
10	10	11	24	23	3	70.000	2.000
11	11	12	25	24	3	78.000	2.000
12	12	13	26	25	3	86.000	2.000
13	14	15	28	27	3	5.000	5.500
14	15	16	29	28	3	15.000	5.500
15	16	17	30	29	2	25.000	5.500
16	17	18	31	30	2	33.000	5.500
17	18	19	32	31	2	39.000	5.500
18	19	20	33	32	2	46.000	5.500
19	20	21	34	33	2	52.000	5.500
20	21	22	35	34	2	58.000	5.500
21	22	23	36	35	2	62.000	5.500
22	23	24	37	36	3	70.000	5.500
23	24	25	38	37	3	78.000	5.500
24	25	26	39	38	3	86.000	5.500
25	27	28	41	40	3	5.000	8.500
26	28	29	42	41	2	15.000	8.500
27	29	30	43	42	2	25.000	8.500
28	30	31	44	43	2	33.000	8.500
29	31	32	45	44	2	39.000	8.500
30	32	33	46	45	2	46.000	8.500
31	33	34	47	46	2	52.000	8.500
32	34	35	48	47	2	58.000	8.500
33	35	36	49	48	2	62.000	8.500
34	36	37	50	49	2	70.000	8.500
35	37	38	51	50	3	78.000	8.500
36	38	39	52	51	3	86.000	8.500
37	43	44	53	53	1	34.500	10.750
38	44	45	54	53	1	39.000	10.750
39	45	46	55	54	1	46.000	10.750
40	46	47	56	55	1	52.000	10.750
41	47	48	57	56	1	58.000	10.750
42	48	49	58	57	1	62.000	10.750
43	49	50	59	58	1	70.000	10.750
44	50	51	60	59	1	78.000	10.750
45	51	52	61	60	1	86.000	10.750
46	53	54	62	62	1	40.500	12.250
47	54	55	63	62	1	46.000	12.250
48	55	56	64	63	1	52.000	12.250
49	56	57	65	64	1	58.000	12.250
50	57	58	66	65	1	62.000	12.250
51	58	59	67	66	1	70.000	12.250
52	59	60	68	67	1	78.000	12.250
53	60	61	69	68	1	86.000	12.250
54	62	63	71	70	1	47.000	13.500
55	63	64	72	71	1	52.000	13.500
56	64	65	73	72	1	58.000	13.500
57	65	66	74	73	1	62.000	13.500
58	66	67	75	74	1	70.000	13.500
59	67	68	76	75	1	78.000	13.500
60	68	69	77	76	1	86.000	13.500
61	70	71	78	78	1	49.000	14.500
62	71	72	79	78	1	52.000	14.500
63	72	73	80	75	1	58.000	14.500
64	73	74	81	80	1	62.000	14.500
65	74	75	82	81	1	70.000	14.500
66	75	76	83	82	1	78.000	14.500
67	76	77	84	83	1	86.000	14.500
68	78	79	85	85	1	53.000	15.500
69	79	80	86	85	1	56.000	15.500
70	80	81	87	86	1	62.000	15.500
71	81	82	88	87	1	70.000	15.500
72	82	83	89	88	1	78.000	15.500
73	83	84	90	89	1	86.000	15.500
74	85	86	91	91	1	57.000	16.500
75	86	87	92	91	1	62.000	16.500
76	87	88	93	92	1	70.000	16.500
77	88	09	94	93	1	78.000	16.500
78	89	90	95	94	1	86.000	16.500

SSTIPN: 1 LAYER OF GEOTEXTILE P=2000 PPI, EXTENDED, T=1000

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*                                                  *
*  LOAD CASE ----------------------------    2     *
*                                                  *
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LARGEST ELE NO IN THIS INCREMENT 76

LARGEST N P NO IN THIS INCREMENT 95

BAND WIDTH----------------------- 40

TOTAL NUMBER OF EQUATIONS--------- 222

NUMBER OF EQUATIONS IN BLOCK------ 84

NUMBER OF BLOCKS----------------- 3

NUMBER OF N.P FORCE CARDS-------- 3

NUMBER OF PRESSURE CARDS---------- 0

NODAL POINT FORCES (WEIGHTS OF ADDED ELEMENTS)

NP	X-FORCE	Y-FORCE
1	0	0
2	0	0
3	0	0.
4	0.	0.
5	0	0.
6	0	0
7	0.	0
8	0	0
9	0	0.
10	0	0
11	0.	0.
12	0.	0
13	0	0
14	0	0
15	0.	0
16	0	0
17	0	0
18	0	0
19	0	0
20	0	0.
21	0.	0.
22	0	0
23	0	0.
24	0	0
25	0	0.
26	0	0
27	0	0
28	0	0
29	0	0
30	0	0
31	0	0
32	0	0.
33	0	0
34	0	0
35	0	0.
36	0	0
37	0	0
38	0	0
39	0	0
40	0	0.
41	0	0
42	0	0
43	0	0.
44	0	0
45	0	0.
46	0	0
47	0	0
48	0	0
49	0	0
50	0	0
51	0	0.
52	0	0
53	0	0
54	0	0
55	0	0.
56	0	0
57	0	0
58	0	0
59	0	0
60	0	0
61	0	0
62	0	0

63	0	0.
64	0.	0.
65	0	0.
66	0.	0.
67	0.	0.
68	0	0
69	0	0.
70	0	0.
71	0	0.
72	0	0
73	0	0
74	0	0.
75	0.	0.
76	0	0
77	0	0.
78	0.	0.
79	0.	0.
80	0	0
81	0	0
82	0	0
83	0	0.
84	0	0
85	0	0
86	0	0.
87	0	0.
88	0	0
89	0	0
90	0.	0.
91	0	0
92	0	-4.50
93	0.	-4.50
94	0	-2.00
95	0	0

LOAD CASE : 2 ITERATION : 2

NP	DELTA-X	DELTA-Y	DELTA-ZZ	X-DISP	Y-DISP	ZZ-ROTAT	TOTAL	NP
1	.0000	.0000	.0000	.0000	.0000	.0000	.0000	1
2	.0000	.0000	.0000	.0000	.0000	.0000	.0000	2
3	.0000	.0000	.0000	.0000	.0000	.0000	.0000	3
4	.0000	.0000	.0000	.0000	.0000	.0000	.0000	4
5	.0000	.0000	.0000	.0000	.0000	.0000	.0000	5
6	.0000	.0000	.0000	.0000	.0000	.0000	.0000	6
7	.0000	.0000	.0000	.0000	.0000	.0000	.0000	7
8	.0000	.0000	.0000	.0000	.0000	.0000	.0000	8
9	.0000	.0000	.0000	.0000	.0000	.0000	.0000	9
10	.0000	.0000	.0000	.0000	.0000	.0000	.0000	10
11	.0000	.0000	.0000	.0000	.0000	.0000	.0000	11
12	.0000	.0000	.0000	.0000	.0000	.0000	.0000	12
13	.0000	.0000	.0000	.0000	.0000	.0000	.0000	13
14	.0000	-.0001	.0000	.0000	-.0007	.0000	.0007	14
15	.0000	.0000	.0000	-.0008	.0003	.0000	.0009	15
16	.0000	-.0001	.0000	-.0005	-.0004	.0000	.0007	16
17	-.0005	.0002	.0000	-.0049	.0023	.0000	.0055	17
18	-.0198	.0087	.0000	-.2025	.0357	.0000	.2056	18
19	-.0394	.0026	.0000	-.2846	-.0881	.0000	.3024	19
20	-.0419	-.0030	.0000	-.1886	-.1285	.0000	.2254	20
21	-.0271	-.0210	.0000	-.0788	-.1608	.0000	.1702	21
22	-.0010	-.0010	.0000	-.0007	-.0059	.0000	.0060	22
23	-.0010	-.0018	.0000	-.0001	-.0049	.0000	.0049	23
24	.0007	-.0058	.0000	.0014	-.0106	.0000	.0107	24
25	.0019	-.0020	.0000	.0022	-.0054	.0000	.0059	25
26	.0000	.0004	.0000	.0000	-.0028	.0000	.0028	26
27	.0000	-.0001	.0000	.0000	-.00[illegible]2	.0000	.0012	27
28	-.0002	.0001	.0000	-.0017	.0004	.0000	.0017	28
29	.0000	-.0001	.0000	-.0013	.0001	.0000	.0013	29
30	-.0183	.0058	.0000	-.1756	.0594	.0000	.1854	30
31	-.0328	.0177	.0000	-.2785	.0708	.0000	.2874	31
32	-.0562	.0112	.0000	-.3583	-.1127	.0000	.3756	32
33	-.0883	-.0085	.0000	-.3286	-.2453	.0000	.4109	33
34	-.1023	-.0270	.0000	-.2807	-.2540	.0000	.3861	34
35	-.0914	-.0442	.0000	-.2041	-.1914	.0000	.2798	35
36	-.0006	-.0045	.0000	.0015	-.0133	.0000	.0134	36
37	.0018	-.0113	.0000	.0024	-.0185	.0000	.0187	37
38	.0020	-.0036	.0000	.0020	-.0104	.0000	.0106	38
39	.0000	.0015	.0000	.0000	-.0046	.0000	.0046	39
40	.0000	-.0002	.0000	.0000	-.0017	.0000	.0017	40
41	-.0007	.0002	.0000	-.0060	.0012	.0000	.0061	41
42	-.0137	.0034	.0000	-.0798	.0154	.0000	.0813	42
43	-.0348	.0145	.0000	-.1894	.1026	.0000	.2155	43
44	-.0371	.0213	.0000	-.2144	.0695	.0000	.2254	44
45	-.0401	.0173	.0000	-.2188	-.1509	.0000	.2658	45
46	-.0423	-.0084	.0000	-.1980	-.3321	.0000	.3856	46
47	.0446	-.0289	.0000	-.1705	-.3415	.0000	.3817	47
48	-.0415	-.0652	.0000	-.1331	-.3173	.0000	.3453	48
49	-.0092	-.0829	.0000	-.0408	-.2178	.0000	.2213	49
50	-.0018	-.0287	.0000	-.0043	-.0470	.0000	.0482	50
51	-.0008	-.0031	.0000	-.0019	-.0119	.0000	.0121	51
52	.0000	.0020	.0000	.0000	-.0081	.0000	.00[illegible]	52
53	-.0380	.0216	.0000	-.4601	.1103	.0000	.4627	53
54	-.0389	.0174	.0000	-.4088	-.1324	.0000	.4278	54
55	-.0383	-.0034	.0000	.2188	-.3111	.0000	.3804	55
56	-.0345	-.0287	.0000	-.1836	-.3555	.0000	.3913	56
57	-.0298	-.0683	.0000	-.1172	-.3481	.0000	.3675	57
58	-.0189	-.0883	.0000	-.0489	-.250[illegible]	.0000	.2553	58
59	-.0080	-.0294	.0000	.0413	-.09[illegible]	.0000	.1032	59
60	-.0033	-.0033	.0000	-.0044	-.011[illegible]	.0000	.0120	60

61	0000	.0021	.0000	0000	- 0083	0000	0083	61
62	- 0310	.0172	.0000	-.0790	- 0028	.0000	0790	62
63	-.0237	-.0087	.0000	-.0781	-.1355	0000	.1564	63
64	-.0282	-.0298	0000	-.0770	-.1915	.0000	.2064	64
65	-.0226	-.0767	.0000	-.0706	-.2437	.0000	2538	65
66	- 0238	- 0877	0000	- 0810	- 1798	0000	1896	66
67	-.0163	- 0316	.0000	- 0327	- 1247	0000	1289	67
68	-.0064	- 0039	.0000	- 0080	-.0102	0000	0130	68
69	.0000	.0019	0000	.0000	- 0044	0000	.0044	69
70	- 0256	0039	0000	- 0558	- 0358	0000	0662	70
71	-.0238	-.0031	.0000	-.0849	-.0679	.0000	.1036	71
72	-.0249	-.0288	0000	-.0578	-.1386	.0000	1483	72
73	-.3115	-.0993	0000	- 3483	-.2228	.0000	4118	73
74	- 0317	-.0890	0000	- 0639	- 1592	0000	1715	74
75	- 0218	- 0327	.0000	-.0378	- 1380	.0000	1511	75
76	-.0064	- 0049	.0000	-.0089	-.0101	0000	.0142	76
77	.0000	0017	0000	0000	-.0032	0000	0032	77
78	- 5459	- 0055	0000	- 5525	- 0483	0000	5616	78
79	-.6830	0022	.0000	-.7073	-.0613	0000	7100	79
80	- 6888	- 0676	0000	-.7181	-.1458	.0000	.7308	80
81	-.9124	- 2448	0000	-.9346	-.2890	0000	.9782	81
82	- 0135	- 2831	0000	- 0255	- 3445	0000	3454	82
83	.6019	- 0567	.0000	.6003	- 0608	0000	.6033	83
84	0000	0825	0000	.0000	.0793	0000	.0793	84
85	- 5768	0032	0000	-.6816	- 0134	0000	.6817	85
86	- 6804	- 0863	0000	- 6866	- 0867	0000	6920	86
87	-.6774	-.3896	0000	-.6644	-.3887	.0000	7671	87
88	-.6618	- 5772	0000	- 8881	-.6084	.0000	9021	88
89	2757	-.1374	.0000	2745	- 1400	0000	3081	89
90	0000	2043	0000	0000	2025	0000	2025	90
91	- 6410	- 0681	.0000	-.6410	- 0681	0000	.6444	91
92	-.6424	- 3700	.0000	-.6424	- 3700	0000	.7414	92
93	-.6400	- 5804	0000	-.6400	-.5804	0000	.8640	93
94	- 1137	- 3158	0000	- 1137	- 3158	0000	3355	94
95	0000	3085	0000	0000	.3085	0000	.3085	95

STRUCTURAL ELEMENTS - LINEAR ELASTIC

BAR ELEMENTS--INTERNAL MEMBER FORCES

ELEMENT NO	AXIAL FORCE
INCREMENTAL VALUES	
1	- 0984
2	-.1085
3	- 0228
4	-.0300
5	- 0162
6	-.0372
7	0493
8	.2425
9	0587
10	0058
11	0061
TOTAL VALUES	
1	- 4427
2	-.6577
3	-.2501
4	-.0412
5	.1690
6	3822
7	.5166
8	.7166
9	.2717
10	0181
11	0143

FOUR NODE SOLID ELEMENTS - MODULI AND STRAINS (STRAINS IN PERCENT)

ELE	ELAS MOD	BULK MOD	SHEAR MOD	POIS	EPS-X	EPS-Y	GAM-XY	EPS-1	EPS-3	GAMMAX	ELE
1	539 0	341 3	232 5	159	003	008	003	007	002	004	1
2	504.3	321 4	219.3	.159	- 001	002	018	.010	- 008	018	2
3	511 1	321 2	221 1	156	022	- 023	.054	.035	- 036	071	3
4	6	17 2	2	494	1 646	- 475	2.315	2 156	- 984	3 140	4
5	6	17 2	2	494	788	406	7 080	4 131	-2 958	7 089	5
6	7	18 0	2	494	- 676	2 433	6.360	4.426	-2.670	7.097	6
7	7	18 4	2	493	-1.348	3.468	3 823	4.073	-1 953	6 023	7
8	6	16 9	2	494	- 975	1 961	- 819	2 017	-1 031	3.048	8
9	458 7	336 7	186 6	223	- 004	135	.005	135	- 004	139	9
10	471 4	360 5	190 6	235	-.010	.193	020	.194	- 010	204	10
11	475 7	372.0	191 4	.243	- 005	.201	- 078	208	- 012	220	11
12	514 2	366 7	212.4	210	014	.102	- 045	108	009	099	12
13	504 5	299 8	223.9	127	012	006	004	012	005	007	13
14	383.5	224 5	171.5	116	- 002	-.012	036	.011	- 026	037	14
15	1 9	13.6	6	476	.894	-.981	2.549	1.542	-1 610	3.152	15
16	5 7	16.4	2 0	439	2.504	-1 539	3.738	3 235	-2.271	5 506	16
17	1 7	17 0	6	483	1 433	155	4 724	3 241	-1 653	4 893	17
18	6	17 2	2	494	- 855	2 723	6 639	3.464	-1.995	5 459	18
19	6	17 1	2	494	-1 834	3.699	6 331	5 137	-3 272	8 408	19
20	7	18.2	2	494	-2 056	4 610	4 327	5 435	-2 882	8 118	20
21	6	17 2	2	494	-1.289	3 232	2 242	3 495	-1 552	5 046	21
22	426 0	341 7	170 3	251	-.015	289	031	289	- 016	305	22
23	406 3	307	184.9	232	- 003	231	- 102	242	- 014	256	23
24	465 3	311 0	186.3	191	027	113	- 049	.119	.020	099	24
25	371 8	222 1	184 6	130	038	- 008	049	049	- 017	066	25
26	4	13 4	1	495	387	- 269	1.311	776	- 675	1 457	26
27	0	1	0	.495	1 420	- 979	804	1 485	-1.044	2 530	27
28	1 9	13.6	6	477	1 066	- 700	- 657	1.125	- 759	1 884	28
29	2 0	14 6	7	477	700	661	- 031	705	655	050	29
30	5	16.2	.2	494	-.320	2 063	-2 595	2 660	- 887	3 537	30
31	6	15 8	.2	494	- 805	2.904	-4 004	3 778	-1 679	5 457	31
32	6	15.6	.2	494	-1.513	3.558	-4 222	4.320	-2 277	6.597	32
33	7	17 8	2	494	-1 882	5 504	-2 170	5 660	-2 038	7 698	33
34	7	17 1	.2	483	- 232	3.330	- 227	3 633	- 235	4 068	34
35	309 8	269.7	121 5	275	-.013	450	- 028	454	-.017	471	35
36	346.8	217 4	150.2	154	001	084	005	.084	.001	083	36
37	271 5	431.3	97 9	387	431	- 032	18 584	9 494	-9 085	18 580	37
38	395 8	448.1	146.3	.335	-.576	1.813	19 619	10 599	-9.364	19 963	38
39	426.8	452.5	161 5	322	-1.304	3 710	10 303	6 932	-4.526	11 458	39
40	245 5	427 9	87 9	387	- 998	4 522	2.301	4 752	-1.226	5.978	40
41	182 3	417 5	58 7	432	- 980	5 124	- 132	5 125	- 988	6 110	41
42	11 9	398 6	4 0	495	- 983	4 166	- 881	4 202	-1 019	5 221	42
43	233 7	428 4	83.3	402	- 784	3.427	-3.038	3 919	-1 258	5 178	43
44	639 7	558.1	250 8	.275	.276	1 790	-2 158	2.351	- 285	2 637	44
45	1112 4	873 8	489 2	137	- 039	066	030	068	- 041	109	45
46	1	4.0	0	495	-.050	040	- 171	091	- 102	193	46
47	11 9	398 6	4 0	495	-.035	.048	248	137	- 124	261	47
48	324 0	438.2	118 7	385	-.049	090	157	.125	- 084	210	48
49	11 9	398 6	4 0	495	- 391	200	857	425	- 616	1 041	49
50	256 8	429.4	92.2	393	-.255	294	112	300	- 261	561	50
51	577 3	485.2	227.2	271	-.306	2.855	220	2 859	- 310	3 169	51
52	749 2	670.9	282.1	.232	-.226	2 759	- 284	2 765	- 230	2 995	52
53	512 7	486 1	199 4	286	- 078	082	054	087	- 082	169	53
54	11 9	398.6	4 0	495	-.036	.044	- 063	055	- 048	103	54
55	288 5	433.5	104 8	379	021	- 013	120	067	- 058	125	55
56	1	4 0	.0	495	3.509	1 425	15 887	10 380	-5 446	15.826	56
57	1	4 0	0	495	-1 828	1 620	14 481	7 344	-7 552	14 896	57
58	851 3	635.8	346.8	.227	- 301	2.830	705	2 869	- 340	3 209	58
59	671 6	586 5	263.3	276	-.293	2 750	- 584	2 778	- 321	3 099	59
60	362 4	443.4	134 4	348	-.110	107	031	108	- 111	219	60
61	1	4.0	0	495	- 046	- 359	52 830	26.113	-26.518	52.631	61
62	1	4 0	0	495	1.867	-1.726	59 700	29 975	-29 833	59.808	62
63	1	4 0	0	495	3.685	-3 135	54 601	27 788	-27.237	55 025	63
64	1	4.0	0	495	-.403	6.229	64.295	35.231	-29 405	64 636	64
65	1	4 0	0	495	-5.794	21.689	44 132	33.942	-18 048	51 990	65
66	1	4.0	.0	495	-4.032	16.502	-32.821	25.593	-13 122	38 715	66
67	1	4 0	0	495	3 891	-1 402	-31 419	17 059	-14 770	31 829	67
68	1	4 0	0	495	3.886	- 103	-1 800	3 889	- 306	4 195	68
69	220 5	424.7	78 3	408	139	- 117	048	141	- 119	260	69
70	1	4.0	0	495	1.325	8.179	-9.672	9 163	-1 659	10 822	70
71	1	4 0	0	495	-5 746	22 238	22 183	26 101	-9 608	35 709	71
72	1	4.0	0	495	-5 746	20 052	44 347	31.667	-21 562	53 429	72
73	1	4 0	0	495	5 471	-2.019	13 303	9.369	-5 908	15 287	73
74	1	4 0	0	495	.089	-.017	-2 207	1.140	-1 068	2 209	74
75	1292 0	649 1	643 0	005	- 009	015	074	042	- 036	078	75
76	557 1	475.1	219 5	269	-.114	183	- 216	219	- 149	368	76
77	1	4 0	0	495	-1 147	9.069	13 987	11 444	-11 522	22 966	77
78	1	4 0	0	495	1 012	3.899	13.432	9.204	-4.494	13.698	78

FOUR NODE SOLID ELEMENTS - STRESSES

ELE	SIG-X	SIG-Y	TAU-XY	SIG-1	SIG-3	TAU-MAX	THETA	SIG1/SIG3	LEVEL	ELE
1	284	.517	007	.517	.284	126	1 863	1 958	.082	1
2	238	482	039	.488	232	133	6 571	2 141	083	2
3	343	389	127	484	228	128	2 116	2 117	088	3
4	374	546	005	546	374	086	1 584	1 464	1 715	4
5	371	549	015	550	369	090	4 654	1 489	1 806	5
6	466	658	014	659	465	097	4 090	1 419	1 548	6
7	526	726	006	729	527	101	2 346	1 382	2 015	7
8	331	523	- 002	523	331	096	- 467	1 580	1 920	8
9	324	1 046	003	1 046	324	361	- 243	3 229	218	9
10	399	1 380	037	1 382	397	492	2 164	3 479	275	10
11	444	1 438	- 152	1 461	422	520	-8 476	3 465	284	11
12	378	920	- 084	936	362	287	-8.584	2 584	166	12
13	195	307	008	308	194	057	4 289	1 583	640	13
14	118	220	085	251	087	082	25 899	2 893	067	14
15	089	163	011	165	.37	039	7 899	1 886	773	15
16	277	278	032	309	246	032	44 509	1 257	632	16
17	337	414	014	417	335	041	10 157	1 245	820	17
18	371	474	010	475	370	052	5 246	1 283	1 047	18
19	386	476	013	477	385	057	8 624	1 313	1 142	19
20	521	640	010	641	520	061	4 844	1 233	1 211	20
21	382	491	005	491	381	055	2 446	1 287	1 095	21
22	382	1 557	050	1 559	380	590	2 448	4 107	336	22
23	330	1 220	- 171	1 251	298	477	-10 507	4 198	296	23
24	305	680	- 096	703	282	210	-13 582	2 490	133	24
25	198	086	059	247	037	105	81 200	6 635	092	25
26	029	004	0.	042	- 010	026	58 203	-4 047	-1 000	26
27	043	000	- 00.	043	001	022	-85 813	-70 045	-1 000	27
28	093	025	- 021	099	019	040	-73 469	5 096	793	28
29	156	232	002	232	.53	038	1 418	1 486	761	29
30	232	301	- 007	302	202	050	-4 237	1 496	1 001	30
31	255	356	- 010	357	254	052	-5 633	1 407	1 037	31
32	243	347	- 017	349	241	054	-8 898	1 453	1 089	32
33	513	628	- 005	628	513	058	-2 447	1 225	1 154	33
34	517	613	000	613	517	048	- 162	1 186	360	34
35	457	695	- 107	705	448	628	-4 686	3 602	334	35
36	047	330	008	331	047	142	1 592	7 004	122	36
37	357	152	- 166	467	042	213	-59 468	11 183	3 785	37
38	182	053	022	186	050	068	80 652	3 723	1 012	38
39	142	308	112	366	085	140	26 630	4 280	1 219	39
40	012	2.5	- 029	229	008	110	-7 663	27 453	9 633	40
41	- 051	55,	088	569	- 063	316	6 068	-9 006	-1 000	41
42	- 216	215	- 042	219	- 220	219	-5 471	- 996	-1 000	42

43	138	1.178	- 294	1.2-[illegible]	06[illegible]	586	-14 748	20.526	7.258	43
44	141	1.129	085	1 134	133	.501	4.883	8.514	2.793	44
45	- 190	423	113	.443	- 310	328	10.158	-2 138	-1 000	45
46	003	022	009	025	000	.013	21 848	-2858.018	-1 000	46
47	058	144	100	.209	- 009	109	13.119	-22 635	-1 000	47
48	037	407	187	485	- 041	283	22 650	-11 922	-1 000	48
49	- 226	- 014	-.098	023	- 283	143	-21 037	- 088	-1.000	49
50	- 108	.519	119	541	- 129	335	10.359	-4 153	-1.000	50
51	- 421	909	- 571	1 121	- 832	.878	-20.322	-1 773	-1 000	51
52	- 492	911	210	942	- 522	732	8 351	-1 803	-1 000	52
53	- 283	382	115	.391	- 284	333	10 094	-1 348	-1 000	53
54	035	.083	033	[illegible]	-.024	.083	43.510	-5 928	-1 000	54
55	125	098	212	123	- 102	212	46.968	-3 182	-1 000	55
56	293	489	064	579	282	098	13 193	1 897	259	56
57	042	186	- 102	.224	- 016	120	-25.427	-14.179	-1.000	57
58	- 787	1.087	- 205	1 119	- 785	954	-6.211	-1 418	-1.000	58
59	-1 057	625	117	833	-1.085	849	3.978	- 595	-1.000	59
60	- 308	371	052	325	- 312	319	4 689	-1 043	-1 000	60
61	- 008	001	023	020	-.027	023	39 925	-.747	-1.000	61
62	131	102	085	214	019	.094	49 400	11 244	3.808	62
63	275	131	172	390	016	187	56.339	23 980	8 542	63
64	379	425	- 059	485	339	083	-34 180	1 373	139	64
65	686	772	004	772	686	043	2.692	1 128	047	65
66	506	539	- 013	544	501	021	-19 051	1 085	.031	66
67	189	.309	- 011	310	188	081	-5 155	1 648	.241	67
68	190	155	014	195	190	022	70 388	1 297	111	68
69	333	- 088	087	.343	- 088	221	81 229	-3.488	-1.000	69
70	409	414	- 031	443	381	.031	-42.722	1.183	.080	70
71	653	703	.009	704	581	.022	12 111	1.065	.024	71
72	458	457	018	463	405	027	20 470	1 132	049	72
73	210	253	005	253	210	022	6.323	1.208	077	73
74	011	020	.001	.020	.011	004	7 844	1.778	.289	74
75	- 101	.233	475	.589	- 438	504	35.337	-1 301	-1.000	75
76	- 306	1 017	- 475	1 170	- 459	814	-17 840	-2 549	-1 000	76
77	007	038	006	039	006	017	9 740	6.918	2.199	77
78	204	.223	005	.224	202	011	14 613	1 108	.040	78

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SSTIPN   1 LAYER OF GEOTEXTILE, P=4000 PPI, T=0

TOTAL NUMBER OF NODES------------------ 95
NUMBER OF BAR ELEMENTS-----------------  9
NUMBER OF DIFF. BAR MATERIALS----------  1
NUMBER OF BEAM ELEMENTS----------------  0
NUMBER OF DIFF  BEAM MATERIALS---------  0
NUMBER OF NODAL LINKS -----------------  0
NUMBER OF INTERFACE ELEMENTS-----------  0
NO  OF INTERFACE ELE  IN PREEXIST  PART  0
NUMBER OF INTERFACE ELE. IN FOUNDATION-  0
NUMBER OF INTERFACE MATERIALS----------  0
TOTAL NUMBER OF SOIL ELEMENTS---------- 78
NUMBER OF DIFF  SOIL MATERIALS---------  3
NUMBER OF ELEMENTS IN FOUNDATION------- 36
NUMBER OF NODES IN FOUNDATION---------- 52
NUMBER OF PREEXISTING ELEMENTS---------  0
NUMBER OF PREEXISTING NODES------------  0
NUMBER OF CONSTRUCTION LAYERS----------  6
NUMBER OF LOAD CASES-------------------  1

CALING FACTOR ----------       1 00000

ATMOSPHERIC PRESSURE ---       1 05800

UNIT WEIGHT OF WATER ---         03120


OMPUTATION SEQUENCE FOR A TOTAL OF     7  INCREMENTS
--------------------------------------------------

 INCREMENT NO    1      PUT ON LAYER NO    1

 INCREMENT NO    2      PUT ON LAYER NO    2

 INCREMENT NO    3      PUT ON LAYER NO    3

 INCREMENT NO    4      PUT ON LAYER NO    4

 INCREMENT NO    5      PUT ON LAYER NO    5

 INCREMENT NO    6      PUT ON LAYER NO    6

 INCREMENT NO    7      APPLY LOAD CASE    1
```

NODAL POINT INPUT DATA

NODE NUMBER	NODAL POINT COORDINATES X-ORD	Y-ORD	B C. CODE X	Y	ZZ
1	.000	.000	1	1	1
2	10.000	.000	1	1	1
3	20.000	.000	1	1	1
4	30.000	.000	1	1	1
5	36.000	.000	1	1	1
6	42.000	.000	1	1	1
7	50.000	.000	1	1	1
8	54.000	.000	1	1	1
9	58.000	.000	1	1	1
10	66.000	.000	1	1	1
11	74.000	.000	1	1	1
12	82.000	.000	1	1	1
13	90.000	.000	1	1	1
14	.000	4.000	1	0	1
15	10.000	4.000	0	0	0
16	20.000	4.000	0	0	0
17	30.000	4.000	0	0	0
18	36.000	4.000	0	0	0
19	42.000	4.000	0	0	0
20	50.000	4.000	0	0	0
21	54.000	4.000	0	0	0
22	58.000	4.000	0	0	0
23	66.000	4.000	0	0	0
24	74.000	4.000	0	0	0
25	82.000	4.000	0	0	0
26	90.000	4.000	1	0	1
27	.000	7.000	1	0	1
28	10.000	7.000	0	0	0
29	20.000	7.000	0	0	0
30	30.000	7.000	0	0	0
31	36.000	7.000	0	0	0
32	42.000	7.000	0	0	0
33	50.000	7.000	0	0	0
34	54.000	7.000	0	0	0
35	58.000	7.000	0	0	0
36	66.000	7.000	0	0	0
37	74.000	7.000	0	0	0
38	82.000	7.000	0	0	0
39	90.000	7.000	1	0	1
40	.000	10.000	1	0	1
41	10.000	10.000	0	0	0
42	20.000	10.000	0	0	0
43	30.000	10.000	0	0	0
44	36.000	10.000	0	0	0
45	42.000	10.000	0	0	0
46	50.000	10.000	0	0	0
47	54.000	10.000	0	0	0
48	58.000	10.000	0	0	0
49	66.000	10.000	0	0	0
50	74.000	10.000	0	0	0
51	82.000	10.000	0	0	0
52	90.000	10.000	1	0	1
53	36.000	11.500	0	0	0
54	42.000	11.500	0	0	0
55	50.000	11.500	0	0	0
56	54.000	11.500	0	0	0
57	58.000	11.500	0	0	0
58	66.000	11.500	0	0	0
59	74.000	11.500	0	0	0
60	82.000	11.500	0	0	0
61	90.000	11.500	1	0	1
62	42.000	13.000	0	0	0
63	50.000	13.000	0	0	0
64	54.000	13.000	0	0	0
65	58.000	13.000	0	0	0
66	66.000	13.000	0	0	0
67	74.000	13.000	0	0	0
68	82.000	13.000	0	0	0
69	90.000	13.000	1	0	1
70	46.000	14.000	0	0	0
71	50.000	14.000	0	0	0
72	54.000	14.000	0	0	0
73	58.000	14.000	0	0	0
74	66.000	14.000	0	0	0
75	74.000	14.000	0	0	0
76	82.000	14.000	0	0	0
77	90.000	14.000	1	0	1
78	50.000	15.000	0	0	0
79	54.000	15.000	0	0	0
80	58.000	15.000	0	0	0
81	66.000	15.000	0	0	0
82	74.000	15.000	0	0	0
83	82.000	15.000	0	0	0
84	90.000	15.000	1	0	1
85	54.000	16.000	0	0	0
86	58.000	16.000	0	0	0
87	66.000	16.000	0	0	0
88	74.000	16.000	0	0	0
89	82.000	16.000	0	0	0
90	90.000	16.000	1	0	1
91	58.000	17.000	0	0	0
92	66.000	17.000	0	0	0
93	74.000	17.000	0	0	0
94	82.000	17.000	0	0	0
95	90.000	17.000	1	0	1

STRUCTURAL ELEMENTS - LINEAR ELASTIC

BAR ELEMENTS-------

MATERIAL NUMBER	E	AREA	WEIGHT/LENGTH
1	120	1 00	0

ELMT NO	CONNECTED NODES I	J	MATL NO.
1	43	44	1
2	44	45	1
3	45	46	1
4	46	47	1
5	47	48	1
6	48	49	1
7	49	50	1
8	50	51	1
9	51	52	1

SOIL MATERIAL PROPERTY DATA

MATL	UNIT WT	YOUNG'S MODULUS CONSTANT	EXPONENT	RATIO	BULK MODULUS CONSTANT	EXPONENT	STRENGTH PARAMETERS C	PHI	DPHI	KO
1	0680	6000.00	.500	.500	1500 00	.600	00	35.00	00	50
2	0530	40 00	300	900	20 00	200	05	00	00	50
3	0600	1000.00	.400	700	500 00	.500	.50	40.00	00	50

FOUR NODES SOLID ELEMENT DATA

ELET NO	CONNECTED NODES I	J	K	L	MATL NO	ELEMENT CENTER COORDINATES X-ORD	Y-ORD
1	1	2	15	14	3	5.000	2.000
2	2	3	16	15	3	15.000	2.000
3	3	4	17	16	3	25 000	2.000
4	4	5	18	17	2	33 000	2 000
5	5	6	19	18	2	39.000	2 000
6	6	7	20	19	2	46.000	2 000
7	7	8	21	20	2	52 000	2 000
8	8	9	22	21	2	56.000	2.000
9	9	10	23	22	3	62.000	2.000
10	10	11	24	23	3	70.000	2.000
11	11	12	25	24	3	78 000	2 000
12	12	13	26	25	3	86.000	2 000
13	14	15	28	27	3	5 000	5.500
14	15	16	29	28	3	15.000	5 500
15	16	17	30	29	2	25 000	5 500
16	17	18	31	30	2	33.000	5 500
17	18	19	32	31	2	39.000	5 500
18	19	20	33	32	2	46.000	5.500
19	20	21	34	33	2	52.000	5.500
20	21	22	35	34	2	58.000	5.500
21	22	23	36	35	2	62.000	5.500
22	23	24	37	36	3	70 000	5.500
23	24	25	38	37	3	78.000	5.500
24	25	26	39	38	3	86 000	5.500
25	27	28	41	40	3	5 000	8 500
26	28	29	42	41	2	15.000	8 500
27	29	30	43	42	2	25.000	8.500
28	30	31	44	43	2	33 000	8.500
29	31	32	45	44	2	39 000	8 500
30	32	33	46	45	2	46 000	8.500
31	33	34	47	46	2	52.000	8 500
32	34	35	48	47	2	58.000	8.500
33	35	36	49	48	2	62 000	8 500
34	36	37	50	49	2	70 000	8.500
35	37	38	51	50	3	78.000	8.500
36	38	39	52	51	3	86 000	8.500
37	43	44	53	53	1	34 500	10 750
38	44	45	54	53	1	39 000	10 750
39	45	46	55	54	1	46.000	10 750
40	46	47	56	55	1	52 000	10 750
41	47	48	57	56	1	58 000	10 750
42	48	49	58	57	1	62 000	10.750
43	49	50	59	58	1	70 000	10 750
44	50	51	60	59	1	78.000	10 750
45	51	52	61	60	1	86.000	10 750
46	53	54	62	62	1	40 500	12.250
47	54	55	63	62	1	46.000	12.250
48	55	56	64	63	1	52 000	12.250
49	56	57	65	64	1	58 000	12 250
50	57	58	66	65	1	62 000	12 250
51	58	59	67	66	1	70 000	12.250
52	59	60	68	67	1	78 000	12 250
53	60	61	69	68	1	86 000	12 250
54	62	63	71	70	1	47 000	13 500
55	63	64	72	71	1	52.000	13 500
56	64	65	73	72	1	58 000	13.500
57	65	66	74	73	1	62 000	13 500
58	66	67	75	74	1	70 000	13 500
59	67	68	76	75	1	78 000	13 500
60	68	69	77	76	1	86 000	13 500
61	70	71	78	78	1	49 000	14 500
62	71	72	79	78	1	52 000	14 500
63	72	73	80	79	1	56.000	14 500
64	73	74	81	80	1	62 000	14 500
65	74	75	82	81	1	70 000	14 500
66	75	76	83	82	1	78 000	14 500
67	76	77	84	83	1	86 000	14 500
68	78	79	85	85	1	53 000	15 500
69	79	80	86	85	1	56 000	15 500
70	80	81	87	86	1	62 000	15 500
71	81	82	88	87	1	70 000	15 500
72	82	83	89	88	1	78 000	15 500
73	83	84	90	89	1	86 000	15 500
74	85	86	91	91	1	57 000	16 500
75	86	87	92	91	1	62 000	16 500
76	87	88	93	92	1	70 000	16 500
77	88	89	94	93	1	78 000	16 500
78	89	90	95	94	1	86 000	16 500

CONSTRUCTION LAYER INFORMATION

```
SSTIPN- 1 LAYER OF GEOTEXTILE, P=4000 PPI, T=0

**********************************************************
**********************************************************
*                                                        *
*  LOAD CASE -----------------------------    1          *
*                                                        *
**********************************************************
**********************************************************

LARGEST ELE. NO  IN THIS INCREMENT   78

LARGEST N P  NO  IN THIS INCREMENT   95


BAND WIDTH------------------------  40

TOTAL NUMBER OF EQUATIONS--------- 222

NUMBER OF EQUATIONS IN BLOCK------  85

NUMBER OF BLOCKS------------------   3

NUMBER OF N.P  FORCE CARDS--------   3

NUMBER OF PRESSURE CARDS----------   0
```

NODAL POINT FORCES (WEIGHTS OF ADDED ELEMENTS)

NP	X-FORCE	Y-FORCE
1	0.	0.
2	0	0
3	0.	0
4	0.	0
5	0.	0
6	0	0
7	0	0.
8	0	0.
9	0	0
10	0	0
11	0.	0.
12	0.	0
13	0.	0
14	0.	0
15	0	0.
16	0.	0
17	0	0
18	0	0
19	0	0
20	0	0
21	0.	0
22	0.	0
23	0	0.
24	0	0
25	0.	0
26	0	0
27	0	0
28	0.	0.
29	0	0.
30	0.	0.
31	0	0.
32	0	0.
33	0.	0.
34	0	0
35	0.	0
36	0.	0.
37	0.	0.
38	0.	0.
39	0.	0.
40	0	0
41	0	0
42	0	0
43	0.	0.
44	0	0
45	0	0
46	0	0.
47	0	0
48	0.	0
49	0.	0
50	0	0
51	0.	0.
52	0	0.
53	0	0
54	0	0
55	0	0.
56	0	0
57	0.	0.
58	0	0
59	0.	0.
60	0.	0
61	0.	0.
62	0.	0.
63	0	0
64	0.	0.
65	0.	0.
66	0.	0.
67	0	0.
68	0	0
69	0	0.
70	0	0.
71	0.	0
72	0.	0
73	0.	0
74	0	0
75	0.	0
76	0	0
77	0	0.
78	0	0
79	0.	0
80	0.	0
81	0.	0
82	0	0.
83	0.	0.
84	0	0
85	0.	0
86	0.	0.
87	0.	0
88	0	0
89	0.	0
90	0.	0.
91	0.	0
92	0	-4.50
93	0	-4.50
94	0	-2.00
95	0	0

LOAD CASE : 1 ITERATION : 2

NP	DELTA-X	DELTA-Y	DELTA-ZZ	X-DISP	Y-DISP	ZZ-ROTAT	TOTAL	NP
1	.0000	.0000	.0000	.0000	.0000	.0000	.0000	1
2	.0000	.0000	.0000	.0000	.0000	.0000	.0000	2
3	.0000	.0000	.0000	.0000	.0000	.0000	.0000	3
4	.0000	.0000	.0000	.0000	.0000	.0000	.0000	4
5	.0000	.0000	.0000	.0000	.0000	.0000	.0000	5
6	.0000	.0000	.0000	.0000	.0000	.0000	.0000	6
7	.0000	.0000	.0000	.0000	.0000	.0000	.0000	7
8	.0000	.0000	.0000	.0000	.0000	.0000	.0000	8
9	.0000	.0000	.0000	.0000	.0000	.0000	.0000	9
10	.0000	.0000	.0000	.0000	.0000	.0000	.0000	10
11	.0000	.0000	.0000	.0000	.0000	.0000	.0000	11
12	.0000	.0000	.0000	.0000	.0000	.0000	.0000	12
13	.0000	.0000	.0000	.0000	.0000	.0000	.0000	13
14	.0000	.0000	.0000	.0000	.0000	.0000	.0000	14
15	.0000	.0000	.0000	-.0001	.0000	.0000	.0001	15
16	.0000	-.0001	.0000	-.0003	-.0006	.0000	.0007	16
17	-.0010	.0005	.0000	-.0053	.0024	.0000	.0058	17
18	-.0304	.0086	.0000	-.2218	.0451	.0000	.2264	18
19	-.0428	-.0074	.0000	-.3158	-.0780	.0000	.3253	19
20	-.0097	-.0257	.0000	-.1666	-.1470	.0000	.2222	20
21	-.0007	-.0010	.0000	-.0588	-.1388	.0000	.1478	21
22	.0001	.0000	.0000	.0003	-.0048	.0000	.0048	22
23	-.0010	-.0015	.0000	-.0008	-.0047	.0000	.0047	23
24	.0006	-.0058	.0000	.0007	-.0109	.0000	.0110	24
25	.0021	-.0022	.0000	.0020	-.0057	.0000	.0061	25
26	.0000	.0004	.0000	.0000	-.0020	.0000	.0020	26
27	.0000	.0000	.0000	.0000	.0001	.0000	.0001	27
28	.0000	.0000	.0000	.0000	-.0002	.0000	.0002	28
29	.0000	-.0001	.0000	-.0014	.0000	.0000	.0014	29
30	-.0280	.0105	.0000	-.2082	.0639	.0000	.2178	30
31	-.0444	.0149	.0000	-.3110	.0858	.0000	.3228	31
32	-.0542	-.0134	.0000	-.3825	-.1374	.0000	.4064	32
33	-.0334	-.0812	.0000	-.2997	-.2851	.0000	.4135	33
34	-.0348	.0085	.0000	-.2295	-.2322	.0000	.3265	34
35	-.0483	-.0164	.0000	-.1823	-.1637	.0000	.2306	35
36	-.0003	-.0033	.0000	.0016	-.0119	.0000	.0120	36
37	.0015	-.0112	.0000	.0011	-.0200	.0000	.0201	37
38	.0024	-.0042	.0000	.0011	-.0113	.0000	.0114	38
39	.0000	.0018	.0000	.0000	-.0030	.0000	.0030	39
40	.0000	.0000	.0000	.0000	.0001	.0000	.0001	40
41	.0000	.0000	.0000	.0001	-.0002	.0000	.0003	41
42	-.0108	.0087	.0000	-.1107	.0397	.0000	.1176	42
43	-.0471	.0226	.0000	-.2584	.0972	.0000	.2761	43
44	-.0479	.0131	.0000	-.2583	.0823	.0000	.2711	44
45	-.0500	-.0168	.0000	-.2488	-.1885	.0000	.3119	45
46	-.0485	-.0723	.0000	-.2128	-.4080	.0000	.4601	46
47	-.0424	.0131	.0000	-.1778	-.3194	.0000	.3655	47
48	-.0358	-.0155	.0000	-.1420	-.2663	.0000	.3018	48
49	-.0163	-.0708	.0000	-.0584	-.2066	.0000	.2147	49
50	-.0011	-.0271	.0000	-.0068	-.0456	.0000	.0461	50
51	-.0005	-.0038	.0000	-.0038	-.0148	.0000	.0153	51
52	.0000	.0022	.0000	.0000	-.0725	.0000	.0725	52
53	-.0421	.0132	.0000	-.5127	.1185	.0000	.5262	53
54	-.0406	-.0187	.0000	-.4287	-.1713	.0000	.4617	54
55	-.0397	-.0733	.0000	-.2342	-.3889	.0000	.4540	55
56	-.0372	.0115	.0000	-.1774	-.3239	.0000	.3693	56
57	-.0254	-.0175	.0000	-.1384	-.3011	.0000	.3314	57
58	-.0135	-.0735	.0000	-.0575	-.2403	.0000	.2471	58
59	-.0088	-.0301	.0000	.0437	-.0972	.0000	.1066	59
60	-.0032	-.0040	.0000	.0091	-.0138	.0000	.0165	60
61	.0000	.0023	.0000	.0000	-.0898	.0000	.0898	61
62	-.0334	-.0168	.0000	-.0804	-.0327	.0000	.0868	62
63	-.0728	-.0745	.0000	-.1720	-.2060	.0000	.2394	63
64	-.0734	.0119	.0000	-.1244	-.1515	.0000	.1960	64
65	-.0089	-.0173	.0000	-.0595	-.1906	.0000	.1997	65
66	-.0171	-.0748	.0000	-.0606	-.2072	.0000	.2159	66
67	-.0138	-.0315	.0000	-.0418	-.1085	.0000	.1163	67
68	-.0089	-.0047	.0000	-.0181	-.0380	.0000	.0413	68
69	.0000	.0022	.0000	.0000	-.0297	.0000	.0297	69
70	-.0757	-.0607	.0000	-.1066	-.0812	.0000	.1340	70
71	-.0940	-.0744	.0000	-.1275	-.1584	.0000	.2033	71
72	-.0985	.0118	.0000	-.1313	-.0982	.0000	.1640	72
73	-.1084	-.0019	.0000	-.1431	-.1257	.0000	.1904	73
74	-.0231	-.0757	.0000	-.0586	-.1853	.0000	.1944	74
75	-.0179	-.0318	.0000	-.0348	-.1267	.0000	.1314	75
76	-.0088	-.0052	.0000	-.0114	-.0108	.0000	.0155	76
77	.0000	.0017	.0000	.0000	-.0034	.0000	.0034	77
78	-.0952	-.0713	.0000	-.1093	-.1103	.0000	.1553	78
79	-.0888	.0111	.0000	-.1120	-.0339	.0000	.1169	79
80	-.1033	.0014	.0000	-.1200	-.0552	.0000	.1321	80
81	-.2814	-.2738	.0000	-.2792	-.3176	.0000	.4229	81
82	.7315	-.2455	.0000	.7208	-.3074	.0000	.7833	82
83	1.1135	-.0420	.0000	1.1176	-.0483	.0000	1.1186	83
84	.0000	.1197	.0000	.0000	.1163	.0000	.1163	84
85	-.0949	.0111	.0000	-.1008	.0091	.0000	.1013	85
86	-.1053	.0058	.0000	-.1124	-.0188	.0000	.1139	86
87	-.1074	-.4834	.0000	-.1150	-.5159	.0000	.5286	87
88	.8681	-.5382	.0000	.8834	-.5387	.0000	1.0344	88
89	1.5763	-.0513	.0000	1.5752	-.0539	.0000	1.5761	89
90	.0000	.3711	.0000	.0000	.3683	.0000	.3683	90
91	-.0430	.0072	.0000	-.0430	.0072	.0000	.0436	91
92	-.0445	-.4962	.0000	-.0445	-.4962	.0000	.4982	92
93	.7595	-.9017	.0000	.7595	-.9017	.0000	1.1789	93
94	1.6485	-.0530	.0000	1.6485	-.0530	.0000	1.6494	94
95	.0000	.6681	.0000	.0000	.6681	.0000	.6681	95

STRUCTURAL ELEMENTS - LINEAR ELASTIC

BAR ELEMENTS--INTERNAL MEMBER FORCES

ELEMENT NO.	AXIAL FORCE
INCREMENTAL VALUES	
1	-.0160
2	-.0429
3	.0231
4	.1818
5	.1092
6	.3376
7	.2272
8	.0100
9	.0072
TOTAL VALUES	
1	.0014
2	.1953
3	.5389
4	1.0474
5	1.0749
6	1.2538
7	.7752

8 .0473
9 .0541

FOUR NODE SOLID ELEMENTS - MODULI AND STRAINS (STRAINS IN PERCENT)

ELE	ELAS MOD	BULK MOD	SHEAR MOD	POIS	EPS-X	EPS-Y	GAM-XY	EPS-1	EPS-3	GAMMAX	ELE
1	525 8	330 2	227 5	155	001	000	002	001	- 001	002	1
2	523 1	332.3	225.3	.161	001	.008	.008	.010	- 001	011	2
3	532.2	333.8	230.4	.155	.025	- 023	.054	037	-.035	072	3
4	.8	17.1	2	494	1 805	-.594	2.483	2 332	-1.121	3 452	4
5	6	17 1	2	494	783	412	7 748	4 475	-3.280	7 755	5
6	.7	18.0	.2	.494	- 833	2.613	8.461	4.675	-2.794	7.468	6
7	7	18.4	.2	493	-1.305	3 548	2.852	3 882	-1 719	5.601	7
8	6	18.9	2	494	- 701	1 770	-.857	1.880	- 791	2.850	8
9	470 2	345 5	192 5	221	005	118	002	118	005	113	9
10	478.7	389 5	193 3	.238	-.008	195	.037	.197	-.010	208	10
11	474.4	372.3	190 7	244	- 008	208	- 088	.213	-.013	.228	11
12	500.6	362 3	207.7	.205	012	.096	- 048	103	008	097	12
13	438 9	258 6	194 4	121	001	002	- 002	002	000	002	13
14	488.8	272.8	208.8	.117	006	- 006	017	012	- 010	.022	14
15	1.9	13.6	.6	477	1.059	-1.034	3.066	1 869	-1 843	3.712	15
16	7.5	18 5	2 6	420	2 881	-1.702	4.332	3 584	-2.583	6.148	16
17	1 9	16 3	8	481	1 379	311	5 484	3 939	-1 949	5 587	17
18	.8	17 1	.2	494	-1.513	3 456	4.581	4.351	-2 406	6.758	18
19	.6	17 1	.2	.494	-2.138	4.057	4.033	4.666	-2.738	7.392	19
20	.7	18.2	2	.494	-1.541	4 239	3.088	4 628	-1.930	6.557	20
21	6	17 2	2	494	-1 019	2 768	1 726	2 956	-1 208	4 162	21
22	481.8	382 1	180.5	.261	- 006	271	.046	273	- 007	280	22
23	408.7	310 8	165 7	.233	- 008	245	- 078	251	-.014	265	23
24	410.2	278.0	172.8	187	019	111	-.061	120	.010	110	24
25	408 7	229 6	187 0	093	- 001	000	001	001	- 001	002	25
26	.0	1	.0	.495	561	-.883	1.819	.964	-1.066	2 030	26
27	1.9	13 6	.6	476	1 773	-1 219	2.051	2.091	-1.537	3 627	27
28	3.1	13.7	1.0	482	856	- 497	- 100	858	- 499	1 357	28
29	1.3	14 2	5	484	514	910	1 004	1 252	173	1 079	29
30	.5	15.1	.2	.494	- 604	2 734	-1.157	2 826	- 896	3 722	30
31	6	15 8	2	494	-1.189	3.335	-4.035	4 105	-1.958	6 063	31
32	6	15 8	.2	494	-1.287	3 163	-2.720	3 546	-1.670	5.216	32
33	7	17 8	2	494	-1 547	4 955	- 881	4 972	-1 563	6 535	33
34	.6	17 2	.2	494	- 320	3.672	178	3.674	-.322	3 996	34
35	308.6	278 7	120.3	.283	- 020	485	-.038	488	-.021	508	35
36	381.4	220 1	158 5	140	-.016	1 217	.387	1 248	- 045	1 291	36
37	163.0	417 6	56 9	432	023	258	17 568	8 924	-8 645	17 570	37
38	686 7	487 9	287.9	.225	- 774	2.009	20 060	10.714	-9 476	20 193	38
39	235.9	440 0	124 0	359	-1 625	3.830	10 444	7 048	-4 843	11 891	39
40	11 9	398 8	4 0	495	-1 130	4 273	- 175	4 274	-1 131	5 406	40
41	270 5	431 1	97 5	387	- 910	4 935	- 031	4 935	- 910	5 845	41
42	235.7	426 8	84 5	401	- 992	4 317	- 220	4 319	- 995	5 314	42
43	209.8	423 4	74.2	412	- 927	3 626	-3.341	4.083	-1 484	5 567	43
44	670 1	589 1	262.3	277	199	1.854	-2.798	2 862	-.599	3 251	44
45	1318 4	823 3	571 8	153	035	021	288	171	- 115	287	45
46	430.3	453 0	163.0	320	- 061	.031	.220	105	- 134	239	46
47	.1	4 0	0	495	228	076	2 142	1.225	- 922	2 147	47
48	411 2	450 2	154 8	328	- 037	075	455	254	- 215	469	48
49	1	4 0	0	495	-1 018	075	1 410	422	-1 362	1 783	49
50	389.0	444 3	137 1	.348	- 236	1 572	100	1 573	- 237	1 810	50
51	981.9	702 3	405.2	211	- 257	3 628	241	3 632	-.261	3 893	51
52	837.4	898.5	331.8	.262	- 231	3 075	565	3 099	-.255	3 354	52
53	567.8	472 0	220 1	267	- 130	1 822	298	1 833	- 141	1 974	53
54	1	4 0	0	495	612	- 359	3.202	1 735	-1 563	3 316	54
55	1095.2	624 0	497 0	102	053	019	085	073	- 001	.073	55
56	1	4 0	0	495	- 863	- 710	6 537	2 572	-3.965	6 537	56
57	1	4 0	0	495	- 527	- 620	5 969	2 411	-3 558	5 969	57
58	1370 1	785 5	619 8	108	- 498	2 776	1 627	2.966	- 688	3 653	58
59	1861.1	903 1	775.8	070	- 045	2 717	1.154	2.832	- 161	2 993	59
60	413.4	450 6	155.8	.327	- 123	100	080	104	- 127	231	60
61	.1	4 0	.0	495	504	- 319	1 222	829	- 844	1 473	61

62	1	4.0	.0	.495	066	- 127	-1 987	968	-1 029	1.996	62
63	445.1	455.1	189.4	.314	.220	- 126	175	.241	- 147	.388	63
64	1	4.0	.0	495	461	9 788	13.916	13 485	-3.258	16 741	64
65	1	4.0	.0	495	-6.329	21 950	-25.594	26 881	-11.280	38 141	65
66	1	4.0	0	495	-2.588	13 908	-95.703	54.225	-42.886	97 111	66
67	1	4 0	0	495	6 916	-4 002	-67 499	30 720	-27 806	58 526	67
68	1	4.0	.0	495	.051	- 005	-2.228	1 137	-1.091	2.229	68
69	203.9	422 7	72 1	415	.226	- 215	.228	.253	-.243	496	69
70	1	4 0	.0	495	1 005	10 778	-2.788	10.970	.812	10 158	70
71	1	4 0	0	495	-12 338	26 916	-14 445	28 203	-13 624	41 827	71
72	.1	4.0	0	.495	-6.687	16 413	-34.165	25.437	-15.922	41.359	72
73	1	4.0	0	495	16.837	-12 079	-26.488	21.985	-17.227	39.213	73
74	1	4.0	0	495	259	- 151	-6.090	3.106	-2 998	6 104	74
75	897 2	505 2	235 7	267	023	064	008	064	022	042	75
76	.1	4.0	.0	495	-11.122	16 313	5 100	16.532	-11 341	29.873	76
77	1	4.0	0	.495	-9.983	18 258	-C 529	18.631	-10 355	28.986	77
78	.1	4.0	0	.495	20.155	-14 764	-10.760	20.965	-15 574	36 539	78

FOUR NODE SOLID ELEMENTS - STRESSES

ELE	SIG-X	SIG-Y	TAU-XY	SIG-1	SIG-3	TAU-MAX	THETA	SIG1/SIG3	LEVEL	ELE
1	.244	481	004	481	.244	118	.998	1 971	078	1
2	252	524	020	525	251	137	4 127	2 094	090	2
3	.361	.375	.130	498	.238	130	45.483	2 081	.087	3
4	.382	.552	005	.552	.381	085	1 691	1 447	1 704	4
5	.374	.552	.016	554	.373	.090	5 077	1.485	1 810	5
6	486	682	014	683	485	099	4 081	1 408	1 977	6
7	.535	737	008	737	535	.101	1.668	1 377	2.016	7
8	346	.536	- 002	536	346	.095	- 560	1.549	1 900	8
9	349	.982	001	.982	.349	317	.116	2.815	186	9
10	416	1 408	073	1 413	411	501	4 171	3 441	277	10
11	441	1 473	-.127	1 488	428	.531	-6 930	3 498	.289	11
12	.358	.878	- 089	896	.340	.278	-10 476	2 837	165	12
13	139	278	- 003	278	138	.070	-1 302	2 009	053	13
14	187	245	034	258	154	052	20 708	1 673	038	14
15	102	177	013	177	100	.038	9.799	1 763	784	15
16	.284	.270	038	.316	.238	039	60 310	1 329	781	16
17	.353	433	017	437	.350	.043	11 630	1 249	870	17
18	381	490	009	490	380	055	4 854	1 290	1 104	18
19	.374	.488	.008	489	.374	.057	4 046	1 308	1.150	19
20	514	628	007	628	513	.057	3.653	1 224	1 150	20
21	.350	.456	004	.456	350	053	1.915	1.303	1 081	21
22	417	1 550	089	1 557	410	573	4 486	3 796	317	22
23	.322	1.277	-.129	1.294	.305	.495	-7.587	4 243	.305	23
24	.286	.833	- 104	860	229	.218	-14 488	2.887	145	24
25	041	091	.002	091	041	025	2 480	2 207	.022	25
26	002	- 008	003	003	- 007	005	68 988	- 442	-1 000	26
27	.087	008	007	088	006	041	85.461	18 567	629	27
28	.091	.024	- 008	092	023	.034	-83.150	3 988	688	28
29	.160	.245	.008	246	.159	043	4.124	1 543	.685	29
30	224	329	- 005	329	223	053	-2 816	1 473	1 056	30
31	.260	.384	-.011	.385	.259	.063	-5.616	1 413	1.069	31
32	218	.319	- 014	.321	.216	.053	-7.972	1.487	1.052	32
33	478	.589	- 001	589	478	055	-.743	1 231	1 105	33
34	476	571	003	571	476	048	1 801	1 201	956	34
35	420	820	- 026	1 620	490	665	-1.065	3 717	.341	35
36	051	259	- 006	259	.051	104	-1 668	5 061	089	36
37	.101	.078	- 185	.275	- 098	185	-46 739	-2.867	-1.000	37
38	079	104	018	113	070	022	27 579	1 623	231	38
39	.033	373	.198	.484	- 058	261	24.612	-8 018	-1 000	39
40	-.110	.137	- 106	176	-.149	.162	-20.333	-1 178	-1.000	40
41	-.604	.356	.073	.381	- 610	.485	4.316	-.592	-1.000	41
42	-.605	.423	104	.433	-.616	.524	5.724	- 704	-1 000	42
43	-.086	.912	- 443	1 080	- 254	.667	-20.788	-4 247	-1.000	43
44	202	1.276	.027	1.276	202	.537	1.462	6 332	1.982	44
45	.018	.402	.312	576	-.156	.366	29.185	-3 896	-1.000	45
46	- 083	.037	.025	042	- 088	.085	11 169	- 477	-1.000	46
47	.081	129	.111	219	-.009	.114	38 869	-24 769	-1.000	47
48	025	433	408	685	- 227	456	31 706	-3 020	-1 000	48
49	- 082	.123	- 184	218	- 158	.188	-30.229	-1 384	-1.000	49
50	-.054	381	.311	543	-.216	380	27.499	-2.511	-1.000	50
51	-.450	1.034	- 842	1 414	-.830	1 122	-24.318	-1 703	-1 000	51
52	- 384	865	177	889	- 409	649	7 897	-2 175	-1 000	52
53	- 302	.350	131	376	-.328	.352	10 926	-1 146	-1 000	53
54	.056	.078	081	149	- 015	.082	41.008	-10 196	-1.000	54
55	617	.328	352	.852	.091	.381	56.227	9.393	3.120	55
56	115	035	134	214	- 064	139	53 283	-3 325	-1 000	56
57	.086	.213	- 120	281	-.001	141	-29.212	-243 258	-1.000	57
58	-.663	1 108	-.316	1 162	- 718	.940	-9.826	-1 620	-1.000	58
59	-1.609	735	105	740	-1.613	1.177	2 563	- 459	-1 000	59
60	- 425	244	102	259	- 440	350	8 480	- 589	-1 000	60
61	018	024	.003	026	016	005	16.506	1 607	.226	61
62	.138	.099	104	225	.013	106	50.346	17 580	6.163	62
63	1.164	-.156	.389	1.251	-.253	752	75.298	-4.948	-1.000	63
64	498	592	- 081	638	451	094	-29 886	1 415	154	64
65	.649	.764	-.022	772	.645	.063	-10 071	1 197	073	65
66	.462	.493	- 038	519	437	041	-34.224	1 188	.070	66
67	228	.331	-.018	335	225	055	-10 196	1 487	181	67
68	049	039	014	059	029	015	55 036	2 003	373	68
69	.415	-.256	216	479	- 323	401	73.527	-1 486	-1 000	69
70	522	591	- 037	607	506	051	-23.502	1 200	074	70
71	583	.631	- 006	631	.582	.025	-6 706	1 085	.032	71
72	387	423	- 014	427	382	022	-13 716	1 117	044	72
73	.274	.298	-.011	301	270	.015	-21.478	1 113	042	73
74	013	021	.000	021	.013	.004	-2.559	1 633	235	74
75	358	587	018	589	.356	107	4 904	1 604	.224	75
76	292	332	002	332	292	020	2 869	1 139	052	76
77	336	375	- 003	375	.335	020	-3 752	1 119	044	77
78	246	235	- 004	247	233	007	-70.821	1 059	022	78

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SSTIPN. 1 LAYER OF GEOTEXTILE, P=4000 PPI, T=1000

TOTAL NUMBER OF NODES------------------ 95
NUMBER OF BAR ELEMENTS-----------------  9
NUMBER OF DIFF  BAR MATERIALS----------  1
NUMBER OF BEAM ELEMENTS----------------  0
NUMBER OF DIFF  BEAM MATERIALS---------  0
NUMBER OF NODAL LINKS -----------------  0
NUMBER OF INTERFACE ELEMENTS-----------  0
NO  OF INTERFACE ELE  IN PREEXIST  PART  0
NUMBER OF INTERFACE ELE. IN FOUNDATION-  0
NUMBER OF INTERFACE MATERIALS----------  0
TOTAL NUMBER OF SOIL ELEMENTS---------- 78
NUMBER OF DIFF  SOIL MATERIALS---------  3
NUMBER OF ELEMENTS IN FOUNDATION------- 36
NUMBER OF NODES IN FOUNDATION---------- 52
NUMBER OF PREEXISTING ELEMENTS---------  0
NUMBER OF PREEXISTING NODES------------  0
NUMBER OF CONSTRUCTION LAYERS----------  6
NUMBER OF LOAD CASES-------------------  2

CALING FACTOR ---------      1 00000

ATMOSPHERIC PRESSURE ---      1 05800

UNIT WEIGHT OF WATER ---       03120


OMPUTATION SEQUENCE FOR A TOTAL OF    8  INCREMENTS
-----------------------------------------------------

 INCREMENT NO   1     APPLY LOAD CASE   1

 INCREMENT NO   2     PUT ON LAYER NO   1

 INCREMENT NO   3     PUT ON LAYER NO   2

 INCREMENT NO   4     PUT ON LAYER NO   3

 INCREMENT NO   5     PUT ON LAYER NO   4

 INCREMENT NO   6     PUT ON LAYER NO   5

 INCREMENT NO   7     PUT ON LAYER NO   6

 INCREMENT NO   8     APPLY LOAD CASE   2
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NODAL POINT INPUT DATA

NODE NUMBER	NODAL POINT COORDINATES X-ORD	Y-ORD	B.C. CODE X	Y	ZZ
1	.000	.000	1	1	1
2	10.000	.000	1	1	1
3	20.000	.000	1	1	1
4	30.000	.000	1	1	1
5	36.000	.000	1	1	1
6	42.000	.000	1	1	1
7	50.000	.000	1	1	1
8	54.000	.000	1	1	1
9	58.000	.000	1	1	1
10	66.000	.000	1	1	1
11	74.000	.000	1	1	1
12	82.000	.000	1	1	1
13	90.000	.000	1	1	1
14	.000	4.000	1	0	1
15	10.000	4.000	0	0	0
16	20.000	4.000	0	0	0
17	30.000	4.000	0	0	0
18	36.000	4.000	0	0	0
19	42.000	4.000	0	0	0
20	50.000	4.000	0	0	0
21	54.000	4.000	0	0	0
22	58.000	4.000	0	0	0
23	66.000	4.000	0	0	0
24	74.000	4.000	0	0	0
25	82.000	4.000	0	0	0
26	90.000	4.000	1	0	1
27	.000	7.000	1	0	1
28	10.000	7.000	0	0	0
29	20.000	7.000	0	0	0
30	30.000	7.000	0	0	0
31	36.000	7.000	0	0	0
32	42.000	7.000	0	0	0
33	50.000	7.000	0	0	0
34	54.000	7.000	0	0	0
35	58.000	7.000	0	0	0
36	66.000	7.000	0	0	0
37	74.000	7.000	0	0	0
38	82.000	7.000	0	0	0
39	90.000	7.000	1	0	1
40	.000	10.000	1	0	1
41	10.000	10.000	0	0	0
42	20.000	10.000	0	0	0
43	30.000	10.000	0	0	0
44	36.000	10.000	0	0	0
45	42.000	10.000	0	0	0
46	50.000	10.000	0	0	0
47	54.000	10.000	0	0	0
48	58.000	10.000	0	0	0
49	66.000	10.000	0	0	0
50	74.000	10.000	0	0	0
51	82.000	10.000	0	0	0
52	90.000	10.000	1	0	1
53	36.000	11.500	0	0	0
54	42.000	11.500	0	0	0
55	50.000	11.500	0	0	0
56	54.000	11.500	0	0	0
57	58.000	11.500	0	0	0
58	66.000	11.500	0	0	0
59	74.000	11.500	0	0	0
60	82.000	11.500	0	0	0
61	90.000	11.500	1	0	1
62	42.000	13.000	0	0	0
63	50.000	13.000	0	0	0
64	54.000	13.000	0	0	0
65	58.000	13.000	0	0	0
66	66.000	13.000	0	0	0
67	74.000	13.000	0	0	0
68	82.000	13.000	0	0	0
69	90.000	13.000	1	0	1
70	46.000	14.000	0	0	0
71	50.000	14.000	0	0	0
72	54.000	14.000	0	0	0
73	58.000	14.000	0	0	0
74	66.000	14.000	0	0	0
75	74.000	14.000	0	0	0
76	82.000	14.000	0	0	0
77	90.000	14.000	1	0	1
78	50.000	15.000	0	0	0
79	54.000	15.000	0	0	0
80	58.000	15.000	0	0	0
81	66.000	15.000	0	0	0
82	74.000	1[illegible]0	0	0	0
83	82.000	15 [illegible]	0	0	0
84	90.000	15.000	1	0	1
85	54.000	16.000	0	0	0
86	58.000	16.000	0	0	0
87	66.000	16.000	0	0	0
88	74.000	16.000	0	0	0
89	82.000	16.000	0	0	0
90	90.000	16.000	1	0	1
91	58.000	17.000	0	0	0
92	66.000	17.000	0	0	0
93	74.000	17.000	0	0	0
94	82.000	17.000	0	0	0
95	90.000	17.000	1	0	1

STRUCTURAL ELEMENTS - LINEAR ELASTIC

BAR ELEMENTS

MATERIAL NUMBER	E	AREA	WEIGHT/LENGTH
1	120	1 00	0.

ELMT NO	CONNECTED NODES I	CONNECTED NODES J	MATL NO.
1	43	44	1
2	44	45	1
3	45	46	1
4	46	47	1
5	47	48	1
6	48	49	1
7	49	50	1
8	50	51	1
9	51	52	1

SOIL MATERIAL PROPERTY DATA

MATL	UNIT WT	YOUNG'S MODULUS CONSTANT	YOUNG'S MODULUS EXPONENT	RATIO	BULK MODULUS CONSTANT	BULK MODULUS EXPONENT	STRENGTH PARAMETERS C	STRENGTH PARAMETERS PHI	DPHI	KO
1	.0680	6000 00	500	.500	1500.00	.600	00	35 00	00	50
2	0530	40 00	300	900	20 00	200	05	00	00	50
3	.0600	1000 00	400	700	500.00	.500	50	40 00	00	.50

FOUR NODES SOLID ELEMENT DATA

ELET NO	CONNECTED NODES I	J	K	L	MATL NO	ELEMENT CENTER COORDINATES X-ORD	Y-ORD
1	1	2	15	14	3	5 000	2.000
2	2	3	16	15	3	15.000	2.000
3	3	4	17	16	3	25 000	2 000
4	4	5	18	17	2	33 000	2.000
5	5	6	19	18	2	39 000	2 000
6	6	7	20	19	2	46 000	2.000
7	7	8	21	20	2	52 000	2 000
8	8	9	22	21	2	56.000	2.000
9	9	10	23	22	3	62.000	2 000
10	10	11	24	23	3	70.000	2.000
11	11	12	25	24	3	78 000	2 000
12	12	13	26	25	3	86.000	2 000
13	14	15	28	27	3	5 000	5.500
14	15	16	29	28	3	15 000	5.500
15	16	17	30	29	2	25 000	5 500
16	17	18	31	30	2	33 000	5.500
17	18	19	32	31	2	39.000	5.500
18	19	20	33	32	2	46.000	5 500
19	20	21	34	33	2	52.000	5 500
20	21	22	35	34	2	56.000	5.500
21	22	23	36	35	2	62.000	5 500
22	23	24	37	36	3	70.000	5.500
23	24	25	38	37	3	78.000	5.500
24	25	26	39	38	3	86.000	5.500
25	27	28	41	40	3	5 000	8 500
26	28	29	42	41	2	15 000	8.500
27	29	30	43	42	2	25.000	8.500
28	30	31	44	43	2	33.000	8.500
29	31	32	45	44	2	39 000	8 500
30	32	33	46	45	2	46 000	8.500
31	33	34	47	46	2	52.000	8.500
32	34	35	48	47	2	56 000	8.500
33	35	36	49	48	2	62 000	8 500
34	36	37	50	49	2	70.000	8.500
35	37	38	51	50	3	78.000	8.500
36	38	39	52	51	3	86 000	8 500
37	43	44	53	53	1	34 500	10 750
38	44	45	54	53	1	39 000	10.750
39	45	46	55	54		46 000	10.750
40	46	47	56	55	1	52 000	10 750
41	47	48	57	56	1	56 000	10 750
42	48	49	58	57	1	62.000	10.750
43	49	50	59	58	1	70 000	10.750
44	50	51	60	59	1	78 000	10.750
45	51	52	61	60	1	86 000	10 750
46	53	54	62	62	1	40 500	12.250
47	54	55	63	62	1	46 000	12 250
48	55	56	64	63	1	52.000	12 250
49	56	57	65	64	1	56 000	12 250
50	57	58	66	65	1	62 000	12 250
51	58	59	67	66	1	70 000	12 250
52	59	60	68	67	1	78 000	12.250
53	60	61	69	68	1	86 000	12 250
54	62	63	71	70	1	47.000	13 500
55	63	64	72	71	1	52.000	13.500
56	64	65	73	72	1	56 000	13.500
57	65	66	74	73	1	62 000	13 500
58	66	67	75	74	1	70 000	13 500
59	67	68	76	75	1	78 000	13.500
60	68	69	77	76	1	86 000	13 500
61	70	71	78	78	1	49 000	14 500
62	71	72	79	78	1	52 000	14 500
63	72	73	80	79	1	56 000	14 500
64	73	74	81	80	1	62 000	14.500
65	74	75	82	81	1	70 000	14 500
66	75	76	83	82	1	78 000	14 500
67	76	77	84	83	1	86 000	14 500
68	78	79	86	85	1	53 000	15.500
69	79	80	88	85	1	58 000	15.500
70	80	81	87	86	1	62 000	15 500
71	81	82	88	87	1	70 000	15 500
72	82	83	89	88	1	78 000	15 500
73	83	84	90	89	1	86 000	16 500
74	85	86	91	91	1	57 000	16 500
75	86	87	92	91	1	62 000	16 500
76	87	88	93	92	1	70 000	16.500
77	88	89	94	93	1	78 000	16 500
78	89	90	95	94	1	86 000	16 500

CONSTRUCTION LAYER INFORMATION

```
SSTIPN. 1 LAYER OF GEOTEXTILE, P=4000 PPI, T=1000

****************************************************
****************************************************
*                                                  *
*  LOAD CASE ------------------------------   2    *
*                                                  *
****************************************************
****************************************************

LARGEST ELE. NO  IN THIS INCREMENT   78

LARGEST N P  NO  IN THIS INCREMENT   95


BAND WIDTH-----------------------  40
TOTAL NUMBER OF EQUATIONS--------- 222
NUMBER OF EQUATIONS IN BLOCK------  84
NUMBER OF BLOCKS------------------   3

NUMBER OF N.P  FORCE CARDS--------   3
NUMBER OF PRESSURE CARDS----------   0
```

NODAL POINT FORCES (WEIGHTS OF ADDED ELEMENTS)

NP	X-FORCE	Y-FORCE
1	0.	0
2	0	0
3	0	0.
4	0	0
5	0	0.
6	0	0
7	0	0
8	0	0.
9	0	0.
10	0	0
11	0	0.
12	0	0.
13	0	0
14	0	0
15	0	0
16	0	0.
17	0	0
18	0	0
19	0	0
20	0	0.
21	0	0
22	0	0
23	0	0
24	0	0
25	0	0
26	0	0
27	0	0
28	0	0.
29	[illegible]	0.
[illegible]	[illegible]	0
[illegible]	[illegible]	0
32	0	0
33	0	0
34	0	0
35	0	0.
36	0	0
37	0	0.
38	0	0
39	0	0
40	0	0
41	0	0.
42	0	0
43	0	0
44	0	0
45	0	0
46	0	0
47	0.	0
48	0	0.
49	0	0
50	0	0
51	0.	0
52	0	0
53	0	0
54	0	0
55	0	0
56	0	0.
57	0	0
58	0	0
59	0	0.
60	0	0
61	0.	0.
62	0	0
63	0	0
64	0	0
65	0	0.
66	0	0.
67	0	0
68	0	0
69	0.	0.
70	0	0.
71	0	0.
72	0	0
73	0	0
74	0	0.
75	0	0
76	0	0
77	0	0
78	0	0
79	0	0.
80	0	0
81	0	0
82	0.	0
83	0	0.
84	0	0
85	0	0
86	0	0
87	0	0.
88	0	0
89	0	0
90	0	0
91	0	0
92	0	-4 50
93	0	-4 50
94	0	-2 00
95	0	0

LOAD CASE : 2   ITERATION : 2

NP	DELTA-X	DELTA-Y	DELTA-ZZ	X-DISP	Y-DISP	ZZ-ROTAT	TOTAL	NP
1	0000	0000	.0000	.0000	.0000	.0000	.0000	1
2	0000	0000	0000	.0000	.0000	0000	.0000	2
3	.0000	0000	0000	.0000	0000	0000	0000	3
4	0000	0000	0000	0000	0000	0000	0000	4
5	0000	.0000	0000	0000	.0000	0000	0000	5
6	.0000	.0000	0000	0000	.0000	0000	.0000	6
7	0000	.0000	.0000	.0000	.0000	0000	0000	7
8	0000	0000	0000	0000	0000	0000	0000	8
9	.0000	.0000	0000	0000	0000	0000	0000	9
10	.0000	0000	.0000	.0000	.0000	0000	0000	10
11	.0000	0000	0000	.0000	.0000	0000	.0000	11
12	0000	0000	0000	0000	0000	0000	0000	12
13	.0000	.0000	.0000	0000	0000	0000	0000	13
14	0000	0000	0000	.0000	.0000	.0000	0000	14
15	.0000	0000	0000	- 0002	0000	0000	0002	15
16	0000	- 0001	0000	- 0005	- 0007	0000	0009	16
17	-.0005	0002	0000	- 0052	0026	0000	0059	17
18	-.0217	0105	0000	- 2247	0491	0000	.2300	18
19	- 0418	0008	0000	- 3303	- 0879	0000	.3372	19
20	- 0389	- 0110	0000	- 2039	- 1353	0000	2447	20
21	-.0220	- 0187	0000	- 0839	-.1672	0000	1782	21
22	-.0005	-.0006	0000	- 0005	- 0056	0000	.0056	22
23	-.0010	-.0018	0000	- 0006	- 0051	0000	.0051	23
24	0006	- 0057	0000	0006	- 0107	0000	0107	24
25	0020	- 0021	0000	0018	- 0055	0000	0058	25
26	.0000	0004	0000	.0000	- 0020	0000	.0020	26
27	0000	0000	.0000	0000	0001	0000	.0001	27
28	0000	0000	0000	0000	- 0003	0000	0003	28
29	.0000	.0000	0000	- 0021	0000	0000	0021	29
30	- 0222	0080	0000	- 27.3	0775	0000	2828	30
31	-.0398	.0204	.0000	-.3788	0859	0000	3884	31
32	- 0538	0056	0000	- 4124	- 1205	0000	4297	32
33	-.0744	- 0171	.0000	- 3850	-.2854	0000	4433	33
34	-.0840	- 0232	0000	-.3016	-.2693	0000	4044	34
35	-.0802	- 0358	0000	-.2107	- 1901	0000	2838	35
36	- 0007	- 0044	0000	0008	- 0133	0000	0133	36
37	.0014	-.0109	.0000	.0007	- 0194	0000	0194	37
38	.0022	-.0039	.0000	.0008	-.0110	0000	.0111	38
39	.0000	.0018	0000	.0000	- 0032	.0000	.0032	39
40	0000	0000	0000	0000	0001	0000	0001	40
41	.0000	.0000	0000	0002	- 0002	0000	0003	41
42	-.0155	.0068	0000	-.1129	0644	0000	1300	42
43	- 0387	0122	.0000	- 3334	1318	0000	.3585	43
44	- 0391	0224	0000	- 3246	0688	0000	3314	44
45	- 0400	0070	0000	- 3028	- 1720	0000	3482	45
46	- 0330	- 0198	0000	- 2543	- 3624	0000	4427	46
47	- 0377	-.0268	0000	-.2186	- 3658	0000	4267	47
48	- 0354	- 0452	0000	- 1822	- 3103	0000	3599	48
49	-.0214	- 0826	.0000	-.0941	-.2252	0000	2441	49
50	-.0021	-.0285	0000	-.0258	- 0483	0000	0530	50
51	- 0004	-.0037	0000	-.0123	-.0182	0000	.0203	51
52	.0000	.0022	0000	0000	- 0787	0000	.0787	52
53	- 0380	0224	0000	- 5121	1294	.0000	5272	53
54	- 0351	.0071	.0000	-.4303	- 1358	0000	4518	54
55	-.0346	- 0202	0000	- 2337	- 3521	0000	4228	55
56	- 0325	- 0272	0000	- 1721	- 3737	0000	4114	56
57	-.0280	-.0488	0000	- 1384	-.3353	0000	.3819	57
58	-.0122	-.0880	0000	-.0572	-.2582	.0000	2644	58
59	-.0064	-.0298	.0000	.0442	-.0967	.0000	.1064	59
60	-.0031	-.0036	0000	.0101	-.0133	.0000	.0167	60
61	.0000	.0021	0000	0000	-.0744	0000	.0744	61
62	- 0310	0072	0000	- 0878	- 0031	0000	0879	62
63	- 0323	-.0203	0000	- 0863	-.1683	0000	1891	63
64	- 0312	- 0290	0000	- 0884	- 2033	0000	.2210	64
65	-.0171	- 0488	0000	-.0713	- 2268	0000	2377	65
66	- 0195	- 0868	0000	- 0826	- 1847	0000	1950	66
67	-.0158	-.0318	.0000	- 0772	- 1188	0000	1418	67
68	-.0061	-.0044	0000	- 0155	-.0378	0000	.0408	68
69	0000	0021	0000	.0000	- 0299	0000	.0299	69
70	- 0274	- 0063	0000	- 0814	- 0515	0000	0802	70
71	-.0289	- 0202	0000	-.0871	- 1209	.0000	.1363	71
72	- 0327	- 0290	0000	- 0722	- 1500	0000	1665	72
73	- 0394	- 0565	0000	-.0810	-.1851	0000	.2021	73
74	- 0269	- 0873	0000	- 0655	- 1631	0000	1758	74
75	- 0212	- 0323	0000	- 0397	- 1388	0000	.1424	75
76	- 0082	- 0052	0000	- 0101	-.0107	0000	.0147	76
77	0000	0018	0000	0000	- 0033	0000	.0033	77
78	- 0281	- 0198	0000	- 0479	- 0818	0000	0948	78
79	- 0288	- 0293	0000	- 0483	- 1033	0000	1141	79
80	-.0322	- 0544	0000	-.0533	- 1345	0000	1447	80
81	-.4091	-.2258	0000	- 4328	-.2758	0000	.5129	81
82	2951	- 2848	0000	2830	- 3518	0000	4515	82
83	7491	- 0501	0000	7475	-.0542	.0000	7495	83
84	0000	.0921	0000	.0000	0886	0000	.0886	84
85	-.0230	- 0295	0000	- 0291	-.0480	.0000	0561	85
86	- 0267	- 0525	0000	- 0340	- 0781	0000	0834	86
87	- 0234	-.3579	0000	-.0311	-.3822	0000	.3835	87
88	.0037	- 5249	0000	- 0010	-.5815	0000	5815	88
89	.5808	- 1018	0000	5800	- 1040	0000	.5891	89
90	0000	2415	0000	0000	2395	0000	2395	90
91	0136	- 0519	0000	0136	- 0519	0000	0537	91
92	.0105	- 3591	0000	0105	- 3591	0000	3592	92
93	0184	- 5298	0000	0184	- 5298	0000	5301	93
94	2919	- 2287	0000	2919	- 2287	0000	3708	94
95	.0000	3863	0000	.0000	.3863	0000	3863	95

STRUCTURAL ELEMENTS - LINEAR ELASTIC

BAR ELEMENTS--INTERNAL MEMBER FORCES

ELEMENT NO	AXIAL FORCE
INCREMENTAL VALUES	
1	- 0071
2	- 0181
3	0143
4	0409
5	0868
6	2104
7	2895
8	0264
9	0053
TOTAL VALUES	
1	1780
2	4357
3	7273
4	1 0400
5	1 1221
6	1 3216
7	1 0245

8 .2038
9 1839

FOUR NODE SOLID ELEMENTS - MODULI AND STRAINS (STRAINS IN PERCENT)

ELE	ELAS MOD	BULK MOD	SHEAR MOD	POIS	EPS-X	EPS-Y	GAM-XY	EPS-1	EPS-3	GAMMAX	ELE
1	528 2	331 8	228 5	156	001	000	003	002	- 001	003	1
2	523.8	334 2	225 2	163	001	009	013	013	-.002	.015	2
3	513.7	322.9	222.2	156	024	- 024	055	036	-.037	073	3
4	6	17.2	2	494	1 828	-.848	2 487	2.345	-1.163	3.508	4
5	6	17 1	2	494	880	235	7 912	4 527	-3 412	7 939	5
6	7	17.9	.2	494	-.780	2 340	7 088	4 795	-3.045	7.840	6
7	.7	18.4	.2	493	-1 500	3.856	3.871	4.301	-2.146	6.447	7
8	.6	16.9	.2	.484	-1.041	2.035	- 839	2.091	-1.087	3.188	8
9	465 5	344 2	190 2	224	000	133	011	133	000	134	9
10	479.5	369.8	193 7	238	- 008	.197	035	199	-.008	208	10
11	475.1	371.8	191.1	.243	-.007	203	-.083	.207	-.012	.219	11
12	498.8	351 4	206 9	206	011	094	- 044	100	.008	094	12
13	439 9	259 1	196 1	122	001	002	- 001	002	001	002	13
14	465 4	273 4	207 8	120	012	-.007	024	017	- 013	030	14
15	2.2	13.7	8	472	1.372	-1 280	4.084	2 477	-2 385	4.842	15
16	4 3	15 9	1 5	453	2 721	-1 863	6 554	4 428	-3 570	7 998	16
17	1 1	16 5	4	489	1 160	263	6 633	4 058	-2 835	6 893	17
18	.6	17.1	2	.494	-1 149	3 045	5.215	4 294	-2.398	6 692	18
19	6	17 1	2	494	-2 187	4.038	6 472	5 418	-3.548	8.966	19
20	.7	18.2	2	494	-2.177	4.944	4.246	5.528	-2.762	8.281	20
21	6	17 2	2	494	-1 322	3 211	2 370	3 502	-1 613	5 116	21
22	448.3	361.2	179 5	252	- 007	262	046	254	- 009	263	22
23	407 0	308 3	165.1	232	- 007	237	- 070	.242	- 012	254	23
24	406 2	273.9	171.0	188	018	111	-.054	118	009	109	24
25	408 9	229 7	187 1	093	- 001	000	001	001	- 001	002	25
26	0	1	.0	495	576	-1.073	1 520	873	-1 370	2 242	26
27	4	13.4	1	494	2 451	-1 978	2 149	2 698	-2.225	4 923	27
28	4 0	13.8	1 4	450	819	- 586	596	879	- 646	1 525	28
29	17 9	16 9	5 9	295	098	1 177	979	1 366	- 090	1 456	29
30	5	15 0	2	494	- 662	2.474	-1 410	2.625	- 813	3 438	30
31	6	15.8	.2	494	-1 101	3 225	-2.954	3 681	-1 557	5 238	31
32	6	15.6	2	494	-1 604	3.612	-3.526	4 152	-2.144	6 296	32
33	7	17 8	2	494	-1 873	5 536	- 529	5 546	-1 882	7 428	33
34	7	17 2	.2	494	- 426	3.980	948	4 030	- 476	4 507	34
35	301 7	270 0	117 7	282	- 022	532	420	532	- 150	747	35
36	359 6	219.8	157 5	142	- 072	1 344	559	1 397	- 125	1 522	36
37	11 9	398 6	4 0	495	- 008	259	17 772	9 013	-8 762	17 774	37
38	220 4	424 7	76 3	406	- 763	1 995	19 907	10 664	-9 432	20 097	38
39	323 3	438 1	118 4	385	-1 446	4 294	10 793	7 536	-4.687	12 223	39
40	122 3	412 7	42 2	449	-1 118	5 027	2 105	5 202	-1 293	6 498	40
41	233 8	426 4	83 3	402	- 822	4 586	- 584	5 000	- 836	5 836	41
42	215.8	424.1	76 5	410	- 947	4 134	- 939	4 177	- 990	5 167	42
43	11 9	395 6	4 0	495	- 973	3 583	-3 933	4 315	-1 704	6 019	43
44	748 4	670 1	291 8	282	186	1 882	-2 898	2 697	- 649	3 346	44
45	1473 4	873.0	654 9	125	041	013	316	185	- 131	317	45
46	1	4.0	0	495	- 040	070	- 230	142	- 113	255	46
47	11.9	398.6	4 0	495	- 070	086	698	366	- 350	715	47
48	311 8	438 6	113 8	370	- 140	184	137	198	- 154	351	48
49	11 9	398 6	4 0	495	- 385	296	219	307	- 383	690	49
50	289 9	431 1	97 3	387	- 293	320	061	322	- 295	617	50
51	1084 7	887 9	455.4	169	- 050	2 631	1 554	2 840	- 259	3 099	51
52	594 9	512 8	233 8	272	- 460	3 428	1 882	3 598	- 630	4 229	52
53	551 4	471 0	217 2	269	- 125	1 628	283	1 835	- 135	1 970	53
54	1	4 0	0	495	029	- 021	367	159	- 181	370	54
55	397.7	448 3	149 1	334	044	003	149	101	- 054	155	55
56	1	4 0	0	495	- 097	417	1 800	1 096	- 778	1 872	56
57	1	4 0	0	495	- 154	544	1 742	1 134	- 744	1 877	57
58	1400 9	822 9	625.4	120	- 295	2 800	801	2 851	- 346	3 197	58
59	935 0	680 8	387 4	207	- 309	2 747	- 514	2 769	- 331	3 100	59
60	390.7	447 4	146 2	337	- 111	107	036	109	- 112	221	60
61	1	4 0	0	495	113	- 058	1 037	553	- 498	1 051	61

62	.1	4 0	.0	495	054	-.007	.057	069	- 022	.091	62
63	434.4	453.6	164.7	318	139	- 081	.124	155	- 098	253	63
64	.1	4.0	.0	.495	2 271	6 852	19 906	14 775	-5.652	20.427	64
65	.1	4.0	.0	495	-4.570	21.185	3 832	21.327	-4 712	26.039	65
66	.1	4 0	.0	495	-3.025	16.508	-55.687	36 248	-22.765	59.014	66
67	1	4 0	0	495	4 612	-2 222	-38 793	20 890	-18 500	39 390	67
68	.1	4 0	.0	.495	-.006	017	- 302	157	- 146	.303	68
69	325.4	438 4	119.3	364	108	- 087	086	117	- 098	.213	69
70	.1	4.0	.0	.495	2.337	6.515	-16 584	12 977	-4.125	17.102	70
71	1	4 0	0	495	-4 610	20 909	-3 156	21 006	-4 707	25 714	71
72	.1	4 0	.0	495	-6.563	16.896	18.007	19.954	-9.612	29.566	72
73	.1	4.0	.0	495	8.365	-4.881	4.879	8.801	-5 297	14.097	73
74	1	4.0	.0	495	092	-.052	-3.461	1 752	-1 712	3.464	74
75	875 3	509 6	274 3	231	- 001	034	118	.077	- 044	122	75
76	273.1	431.5	98.6	366	- 218	.302	- 319	347	-.264	611	76
77	1	4.0	.0	495	-5 379	6.597	9.662	8 309	-7.091	15.400	77
78	.1	4.0	.0	495	5.517	-.886	8.958	7.821	-3.190	11.011	78

FOUR NODE SOLID ELEMENTS - STRESSES

ELE	SIG-X	SIG-Y	TAU-XY	SIG-1	SIG-3	TAU-MAX	THETA	SIG1/SIG3	LEVEL	ELE
1	.247	484	.007	.484	247	119	1.756	1.961	078	1
2	257	532	028	535	254	141	5.831	2 106	092	2
3	360	386	129	466	230	129	43.066	2 124	067	3
4	.377	.546	005	547	376	08?	1 694	1 452	1 701	4
5	.361	536	016	540	360	090	5 172	1 500	1 799	5
6	464	657	015	659	463	098	4 499	1 424	1 961	6
7	533	736	.009	.736	.533	102	2 474	1 381	2.031	7
8	.332	.525	-.002	525	332	096	- 476	1 579	1.925	8
9	.342	1 053	018	1.053	347	356	1 442	3.082	211	9
10	420	1 419	068	1 424	415	504	3 857	3 429	277	10
11	437	1 445	-.121	1 460	422	516	-6 729	3 455	.283	11
12	.348	884	- 091	.880	333	.274	-9 701	2.644	164	12
13	.142	.280	- 003	.280	142	069	-1 157	1.973	052	13
14	184	243	048	270	157	056	29 195	1 721	042	14
15	.118	182	.020	.188	.113	036	15 660	1 666	751	15
16	.248	270	.033	.294	224	.035	35 459	1 314	702	16
17	307	.391	.014	.394	304	.045	9.457	1 294	893	17
18	374	480	011	481	373	054	5 741	1 288	1 076	18
19	.366	479	.013	.481	.364	058	6.557	1.320	1 167	19
20	.523	.643	.010	644	.522	.061	4.710	1 233	1.217	20
21	.372	.481	.005	481	.372	055	2.596	1 294	1 094	21
22	424	1 601	088	1 607	417	595	4 273	3 854	326	22
23	.314	1 235	-.114	1.249	.300	.475	-6 970	4 166	295	23
24	.241	627	-.093	649	.219	.215	-12 855	2 957	146	24
25	042	081	002	081	042	024	2 730	2 163	021	25
26	008	- 002	006	010	- 005	008	64 675	-2.033	-1 000	26
27	.127	016	.034	137	.007	065	74 461	20.961	1.301	27
28	081	.030	-.020	088	023	032	-71 028	3.802	848	28
29	.177	182	-.002	183	177	003	-18 710	1.036	063	29
30	201	318	- 006	318	201	059	-2 863	1 585	1 174	30
31	.257	359	-.008	.360	.256	052	-4 437	1 404	1 037	31
32	236	342	-.015	344	233	.055	-8.007	1 475	1 109	32
33	520	.636	-.003	636	520	058	-1.266	1 222	1 153	33
34	509	606	004	606	509	049	2.340	1 191	974	34
35	.436	1 756	.007	1.756	436	661	306	4 036	.366	35
36	.045	.266	-.008	.266	045	111	-2.010	5 909	095	36
37	022	047	-.069	.105	- 035	.070	-39.829	-2.986	-1 000	37
38	023	111	038	125	009	058	20 299	13 863	4 819	38
39	.029	.306	078	327	.009	159	14 646	36.227	13.085	39
40	-.099	.224	- 054	232	- 108	.170	-9 315	-2 162	-1 000	40
41	-.157	446	.055	461	- 182	306	5 16?	-2.787	-1.000	41
42	- 435	.491	-.069	.496	- 440	.468	-4.267	-1 127	-1.000	42
43	.151	.729	- 127	755	124	.316	-11.850	6 085	1 890	43
44	174	1 411	- 098	1 419	166	627	-4 486	8.555	2 808	44
45	-.002	366	.352	579	-.215	397	31.212	-2.689	-1.000	45
46	- 020	- 004	.005	-.002	-.022	010	16.747	110	-1.000	46
47	045	171	.112	.237	- 021	129	30.254	-11.526	-1.000	47
48	034	440	194	518	- 043	281	21 849	-11 912	-1 000	48
49	-.385	- 108	- 137	-.051	- 441	195	-22.386	.116	-1 000	49
50	- 186	.484	.246	564	- 266	415	18.081	-2 126	-1.000	50
51	- 470	1 069	- 715	1 350	- 751	1 051	-21 446	-1 798	-1 000	51
52	- 321	791	249	844	- 374	609	12 069	-2 257	-1 000	52
53	-.247	.370	095	.384	- 261	.323	8.522	-1 469	-1 000	53
54	044	.051	.080	138	-.042	.090	43.871	-3.257	-1 000	54
55	.277	.240	254	.513	005	254	47.084	107.805	39.702	55
56	101	268	057	286	084	101	17 204	3 423	901	56
57	070	199	- 097	251	018	117	-28 166	14 275	4 834	57
58	-.774	1 132	-.333	1.188	-.831	1 010	-9 634	-1 430	-1 000	58
59	-1.392	509	.206	630	-1 413	1 021	5.801	- 446	-1 000	59
60	- 302	307	056	312	- 307	310	5 190	-1 015	-1 000	60
61	.011	.019	002	020	.010	005	15.309	1.983	358	61
62	133	102	094	213	023	.095	49.732	9 407	3 125	62
63	720	- 089	255	794	- 162	478	73.902	-4.887	-1 000	63
64	474	569	- 075	610	432	089	-28 862	1 411	153	64
65	669	707	002	707	669	019	2 327	1 058	021	65
66	547	579	- 022	591	535	.028	-26 867	1 103	038	66
67	201	298	-.016	.298	198	.050	-9 112	1 504	188	67
68	041	021	014	048	014	017	62 221	3 501	929	68
69	.355	-.113	.122	386	- 143	.264	76.256	-2.697	-1 000	69
70	.400	.470	-.034	484	386	049	-22.299	1 254	095	70
71	657	694	- 001	694	657	019	-1 927	1 057	021	71
72	420	456	007	457	419	019	10 955	1 092	034	72
73	220	253	002	253	220	016	4 312	1 149	055	73
74	010	019	001	019	010	004	4 619	1 841	312	74
75	.087	301	319	530	- 142	336	35 725	-3 718	-1 000	75
76	- 137	907	- 315	994	- 225	610	-15 548	-4 424	-1 000	76
77	061	087	004	088	060	014	8 107	1 459	171	77
78	204	216	004	217	203	007	15 490	1 086	025	78

```
SSTIPN: 1 LAYER OF GEOTEXTILE, P=4000 PPI, EXTENDED, T=1000

TOTAL NUMBER OF NODES------------------ 95
NUMBER OF BAR ELEMENTS----------------- 11
NUMBER OF DIFF  BAR MATERIALS----------  1
NUMBER OF BEAM ELEMENTS----------------  0
NUMBER OF DIFF  BEAM MATERIALS---------  0
NUMBER OF NODAL LINKS -----------------  0
NUMBER OF INTERFACE ELEMENTS-----------  0
NO  OF INTERFACE ELE  IN PREEXIST  PART  0
NUMBER OF INTERFACE ELE. IN FOUNDATION-  0
NUMBER OF INTERFACE MATERIALS----------  0
TOTAL NUMBER OF SOIL ELEMENTS---------- 78
NUMBER OF DIFF  SOIL MATERIALS---------  3
NUMBER OF ELEMENTS IN FOUNDATION------- 36
NUMBER OF NODES IN FOUNDATION---------- 52
NUMBER OF PREEXISTING ELEMENTS---------  0
NUMBER OF PREEXISTING NODES------------  0
NUMBER OF CONSTRUCTION LAYERS----------  6
NUMBER OF LOAD CASES-------------------  2

CALING FACTOR ---------      1 00000

ATMOSPHERIC PRESSURE ---      1 05800

UNIT WEIGHT OF WATER ---       03120

OMPUTATION SEQUENCE FOR A TOTAL OF     8  INCREMENTS
-------------------------------------------------

 INCREMENT NO   1     APPLY LOAD CASE   1
 INCREMENT NO   2     PUT ON LAYER NO   1
 INCREMENT NO   3     PUT ON LAYER NO   2
 INCREMENT NO   4     PUT ON LAYER NO   3
 INCREMENT NO   5     PUT ON LAYER NO   4
 INCREMENT NO   6     PUT ON LAYER NO   5
 INCREMENT NO   7     PUT ON LAYER NO   6
 INCREMENT NO   8     APPLY LOAD CASE   2
```

NODAL POINT INPUT DATA

NODE NUMBER	NODAL POINT COORDINATES X-ORD	Y-ORD	B.C. CODE X	Y	ZZ
1	.000	.000	1	1	1
2	10.000	.000	1	1	1
3	20.000	.000	1	1	1
4	30.000	.000	1	1	1
5	38.000	.000	1	1	1
6	42.000	.000	1	1	1
7	50.000	.000	1	1	1
8	54.000	.000	1	1	1
9	58.000	.000	1	1	1
10	66.000	.000	1	1	1
11	74.000	.000	1	1	1
12	82.000	.000	1	1	1
13	90.000	.000	1	1	1
14	.000	4.000	1	0	1
15	10.000	4.000	0	0	0
16	20.000	4.000	0	0	0
17	30.000	4.000	0	0	0
18	38.000	4.000	0	0	0
19	42.000	4.000	0	0	0
20	50.000	4.000	0	0	0
21	54.000	4.000	0	0	0
22	58.000	4.000	0	0	0
23	66.000	4.000	0	0	0
24	74.000	4.000	0	0	0
25	82.000	4.000	0	0	0
26	90.000	4.000	1	0	1
27	.000	7.000	1	0	1
28	10.000	7.000	0	0	0
29	20.000	7.000	0	0	0
30	30.000	7.000	0	0	0
31	38.000	7.000	0	0	0
32	42.000	7.000	0	0	0
33	50.000	7.000	0	0	0
34	54.000	7.000	0	0	0
35	58.000	7.000	0	0	0
36	66.000	7.000	0	0	0
37	74.000	7.000	0	0	0
38	82.000	7.000	0	0	0
39	90.000	7.000	1	0	1
40	.000	10.000	1	0	1
41	10.000	10.000	0	0	0
42	20.000	10.000	0	0	0
43	30.000	10.000	0	0	0
44	38.000	10.000	0	0	0
45	42.000	10.000	0	0	0
46	50.000	10.000	0	0	0
47	54.000	10.000	0	0	0
48	58.000	10.000	0	0	0
49	66.000	10.000	0	0	0
50	74.000	10.000	0	0	0
51	82.000	10.000	0	0	0
52	90.000	10.000	1	0	1
53	38.000	11.500	0	0	0
54	42.000	11.500	0	0	0
55	50.000	11.500	0	0	0
56	54.000	11.500	0	0	0
57	58.000	11.500	0	0	0
58	66.000	11.500	0	0	0
59	74.000	11.500	0	0	0
60	82.000	11.500	0	0	0
61	90.000	11.500	1	0	1
62	42.000	13.000	0	0	0
63	50.000	13.000	0	0	0
64	54.000	13.000	0	0	0
65	58.000	13.000	0	0	0
66	66.000	13.000	0	0	0
67	74.000	13.000	0	0	0
68	82.000	13.000	0	0	0
69	90.000	13.000	1	0	1
70	46.000	14.000	0	0	0
71	50.000	14.000	0	0	0
72	54.000	14.000	0	0	0
73	58.000	14.000	0	0	0
74	66.000	14.000	0	0	0
75	74.000	14.000	0	0	0
76	82.000	14.000	0	0	0
77	90.000	14.000	1	0	1
78	50.000	15.000	0	0	0
79	54.000	15.000	0	0	0
80	58.000	15.000	0	0	0
81	66.000	15.000	0	0	0
82	74.000	15.000	0	0	0
83	82.000	15.000	0	0	0
84	90.000	15.000	1	0	1
85	54.000	16.000	0	0	0
86	58.000	16.000	0	0	0
87	66.000	16.000	0	0	0
88	74.000	16.000	0	0	0
89	82.000	16.000	0	0	0
90	90.000	16.000	1	0	1
91	58.000	17.000	0	0	0
92	66.000	17.000	0	0	0
93	74.000	17.000	0	0	0
94	82.000	17.000	0	0	0
95	90.000	17.000	1	0	1

BAR ELEMENTS-------

MATERIAL NUMBER	E	AREA	WEIGHT/LENGTH
1	120.	1 00	0

ELMT NO.	CONNECTED NODES I	J	MATL NO
1	41	42	1
2	42	43	1
3	43	44	1
4	44	45	1
5	45	46	1
6	46	47	1
7	47	48	1
8	48	49	1
9	49	50	1
10	50	51	1
11	51	52	1

SOIL MATERIAL PROPERTY DATA

MATL	UNIT WT	YOUNG'S MODULUS CONSTANT	EXPONENT	RATIO	BULK MODULUS CONSTANT	EXPONENT	STRENGTH PARAMETERS C	PHI	DPHI	KO
1	0880	8000 00	500	.500	1500 00	600	00	35.00	.00	.50
2	.0530	40 00	.300	300	20 00	200	.05	00	.00	.50
3	0800	1000 00	400	.700	500.00	.500	50	40.00	00	50

FOUR NODES SOLID ELEMENT DATA

ELET NO	CONNECTED NODES I	J	K	L	MATL NO	ELEMENT CENTER COORDINATES X-ORD	Y-ORD
1	1	2	15	14	3	5 000	2 000
2	2	3	16	15	3	15.000	2.000
3	3	4	17	16	3	25.000	2.000
4	4	5	18	17	2	33.000	2 000
5	5	6	19	18	2	39 000	2 000
6	6	7	20	19	2	46.000	2.000
7	7	8	21	20	2	52.000	2 000
8	8	9	22	21	2	58.000	2.000
9	9	10	23	22	3	62 000	2 000
10	10	11	24	23	3	70.000	2.000
11	11	12	25	24	3	78.000	2 000
12	12	13	26	25	3	86.000	2.000
13	14	15	28	27	3	5 000	5 500
14	15	16	29	28	3	15.000	5.500
15	16	17	30	29	2	25.000	5.500
16	17	18	31	30	2	33 000	5.500
17	18	19	32	31	2	39.000	5.500
18	19	20	33	32	2	46.000	5.500
19	20	21	34	33	2	52 000	5.500
20	21	22	35	34	2	58 000	5.500
21	22	23	36	35	2	62 000	5.500
22	23	24	37	36	3	70.000	5.500
23	24	25	38	37	3	78 000	5 500
24	25	26	39	38	3	86.000	5.500
25	27	28	41	40	3	5.000	8 500
26	28	29	42	41	2	15.000	8.500
27	29	30	43	42	2	25 000	8 500
28	30	31	44	43	2	33.000	8.500
29	31	32	45	44	2	39.000	8.500
30	32	33	46	45	2	46 000	8.500
31	33	34	47	46	2	52 000	8 500
32	34	35	48	47	2	58.000	8.500
33	35	36	49	48	2	62.000	8 500
34	36	37	50	49	2	70 000	8.500
35	37	38	51	50	3	78 000	8 500
36	38	39	52	51	3	86.000	8.500
37	43	44	53	53	1	34 500	10 750
38	44	45	54	53	1	39.000	10 750
39	45	46	55	54	1	46 000	10 750
40	46	47	56	55	1	52 000	10 750
41	47	48	57	56	1	58.000	10 750
42	48	49	58	57	1	62 000	10.750
43	49	50	59	58	1	70 000	10 750
44	50	51	60	59	1	78.000	10.750
45	51	52	61	60	1	86.000	10 750
46	53	54	62	62	1	40.500	12.250
47	54	55	63	62	1	46 000	12 250
48	55	56	64	63	1	52.000	12.250
49	56	57	65	64	1	58 000	12 250
50	57	58	66	65	1	62 000	12.250
51	58	59	67	66	1	70 000	12 250
52	59	60	68	67	1	78 000	12 250
53	60	61	69	68	1	86 000	12 250
54	62	63	71	70	1	47 000	13 500
55	63	64	72	71	1	52 000	13 500
56	64	65	73	72	1	58 000	13 500
57	65	66	74	73	1	62 000	13 500
58	66	67	75	74	1	70.000	13.500
59	67	68	76	75	1	78 000	13 500
60	68	69	77	76	1	86.000	13 500
61	70	71	78	78	1	49 000	14 500
62	71	72	79	78	1	52 000	14 500
63	72	73	80	79	1	56 000	14 500
64	73	74	81	80	1	62 000	14 500
65	74	75	82	81	1	70 000	14 500
66	75	76	83	82	1	78 000	14 500
67	76	77	84	83	1	86 000	14 500
68	78	79	85	85	1	53 000	15 500
69	79	80	86	85	1	58.000	15 500
70	80	81	87	86	1	62 000	15 500
71	81	82	88	87	1	70 000	15 500
72	82	83	89	88	1	78 000	15 500
73	83	84	90	89	1	86 000	15 500
74	85	85	91	91	1	57 000	16.500
75	86	87	92	91	1	52 000	16.500
76	87	88	93	92	1	70 000	16.500
77	88	89	94	93	1	78 000	16.500
78	89	90	95	94	1	86 000	16 500

SSTIPN 1 LAYER OF GEOTEXTILE, P=4000 PPI, EXTENDED, T=1000

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*****************************************************
*****************************************************
*                                                   *
*  LOAD CASE -----------------------------    2     *
*                                                   *
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LARGEST ELE. NO IN THIS INCREMENT 76

LARGEST N P NO IN THIS INCREMENT 92

BAND WIDTH------------------------ 40

TOTAL NUMBER OF EQUATIONS--------- 222

NUMBER OF EQUATIONS IN BLOCK------ 84

NUMBER OF BLOCKS------------------ 3

NUMBER OF N.P. FORCE CARDS-------- 3

NUMBER OF PRESSURE CARDS---------- 0

NODAL POINT FORCES (WEIGHTS OF ADDED ELEMENTS)

NP	X-FORCE	Y-FORCE
1	0	0.
2	0	0
3	0.	0
4	0	0.
5	0.	0.
6	0.	0
7	0.	0.
8	0	0
9	0.	0.
10	0	0
11	0.	0.
12	0.	0
13	0	0
14	0	0
15	0.	0
16	0	0
17	0.	0.
18	0	0
19	0	0.
20	0	0.
21	0.	0
22	0	0
23	0.	0.
24	0	0
25	0	0
26	0	0
27	0	0
28	0.	0
29	0	0
30	0	0
31	0.	0.
32	0	0
33	0	0
34	0	0
35	0.	0
36	0.	0.
37	0.	0.
38	0	0
39	0	0
40	0	0
41	0.	0.
42	0	0
43	0.	0
44	0.	0
45	0.	0
46	0	0
47	0	0
48	0	0
49	0	0
50	0	0
51	0	0
52	0	0
53	0.	0
54	0	0
55	0	0
56	0	0
57	0	0
58	0	0
59	0.	0.
60	0	0
61	0	0
62	0	0

63	0.	0
64	0.	0
65	0.	0
66	0	0
67	0.	0
68	0	0
69	0	0
70	0.	0
71	0.	0
72	0	0
73	0	0
74	0.	0
75	0.	0
76	0	0
77	0	0
78	0.	0
79	0.	0
80	0	0
81	0	0
82	0.	0
83	0.	0
84	0	0
85	0	0
86	0	0
87	0	0
88	0	0
89	0	0
90	0.	0
91	0	0
92	0	-4.50
93	0.	-4.50
94	0.	-2.00
95	0.	0

LOAD CASE : 2 ITERATION : 2

NP	DELTA-X	DELTA-Y	DELTA-ZZ	X-DISP	Y-DISP	ZZ-ROTAT	TOTAL	NP
1	.0000	.0000	.0000	.0000	.0000	.0000	.0000	1
2	.0000	.0000	.0000	.0000	.0000	.0000	.0000	2
3	.0000	.0000	.0000	.0000	.0000	.0000	.0000	3
4	.0000	.0000	.0000	.0000	.0000	.0000	.0000	4
5	.0000	.0000	.0000	.0000	.0000	.0000	.0000	5
6	.0000	.0000	.0000	.0000	.0000	.0000	.0000	6
7	.0000	.0000	.0000	.0000	.0000	.0000	.0000	7
8	.0000	.0000	.0000	.0000	.0000	.0000	.0000	8
9	.0000	.0000	.0000	.0000	.0000	.0000	.0000	9
10	.0000	.0000	.0000	.0000	.0000	.0000	.0000	10
11	.0000	.0000	.0000	.0000	.0000	.0000	.0000	11
12	.0000	.0000	.0000	.0000	.0000	.0000	.0000	12
13	.0000	.0000	.0000	.0000	.0000	.0000	.0000	13
14	.0000	-.0001	.0000	.0000	-.0010	.0000	.0010	14
15	-.0001	.0001	.0000	-.0008	.0005	.0000	.0008	15
16	.0000	-.0001	.0000	-.0004	-.0005	.0000	.0007	16
17	-.0005	.0002	.0000	-.0048	.0023	.0000	.0053	17
18	-.0177	.0080	.0000	-.1889	.0259	.0000	.1906	18
19	-.0310	-.0013	.0000	-.2652	-.0742	.0000	.2754	19
20	-.0277	-.0089	.0000	-.1559	-.1232	.0000	.1987	20
21	-.0170	-.0155	.0000	-.0608	-.1413	.0000	.1538	21
22	-.0004	-.0005	.0000	.0002	-.0049	.0000	.0049	22
23	-.0009	-.0018	.0000	-.0001	-.0047	.0000	.0047	23
24	.0008	-.0058	.0000	.0015	-.0107	.0000	.0108	24
25	.0022	-.0022	.0000	.0024	-.0057	.0000	.0062	25
26	.0000	.0004	.0000	.0000	-.0028	.0000	.0028	26
27	.0000	-.0002	.0000	.0000	-.0018	.0000	.0018	27
28	-.0002	.0001	.0000	-.0020	.0010	.0000	.0023	28
29	.0001	-.0001	.0000	-.0003	-.0005	.0000	.0006	29
30	-.0143	.0054	.0000	-.1411	.0538	.0000	.1510	30
31	-.0267	.0116	.0000	-.2326	.0518	.0000	.2383	31
32	-.0420	.0018	.0000	-.2978	-.1265	.0000	.3235	32
33	-.0599	-.0137	.0000	-.2577	-.2405	.0000	.3525	33
34	-.0687	-.0187	.0000	-.2189	-.2373	.0000	.3228	34
35	-.0666	-.0300	.0000	-.1535	-.1640	.0000	.2246	35
36	-.0002	-.0036	.0000	.0020	-.0124	.0000	.0126	36
37	.0019	-.0113	.0000	.0027	-.0198	.0000	.0200	37
38	.0025	-.0041	.0000	.0025	-.0108	.0000	.0111	38
39	.0000	.0016	.0000	.0000	-.0045	.0000	.0045	39
40	.0000	-.0002	.0000	.0000	-.0025	.0000	.0025	40
41	-.0009	.0002	.0000	-.0085	.0020	.0000	.0088	41
42	-.0120	.0018	.0000	-.0752	.0195	.0000	.0777	42
43	-.0230	.0137	.0000	-.1408	.0943	.0000	.1695	43
44	-.0247	.0123	.0000	-.1512	.0416	.0000	.1568	44
45	-.0288	-.0036	.0000	-.1507	-.1701	.0000	.2273	45
46	-.0274	-.0167	.0000	-.1337	-.3261	.0000	.3524	46
47	-.0244	-.0224	.0000	-.1113	-.3231	.0000	.3417	47
48	-.0221	-.0375	.0000	-.0872	-.2608	.0000	.2748	48
49	-.0084	-.0733	.0000	-.0300	-.2035	.0000	.2056	49
50	.0006	-.0278	.0000	-.0027	-.0467	.0000	.0468	50
51	-.0001	-.0038	.0000	-.0014	-.0125	.0000	.0126	51
52	.0000	.0023	.0000	.0000	-.0078	.0000	.0078	52
53	-.0239	.0125	.0000	-.1260	.0637	.0000	.1413	53
54	-.0235	.0039	.0000	-.2117	-.1309	.0000	.2489	54
55	-.0240	-.0189	.0000	-.1537	-.2988	.0000	.3360	55
56	-.0224	-.0239	.0000	-.1155	-.3251	.0000	.3450	56
57	-.0124	-.0366	.0000	-.0831	-.2863	.0000	.2981	57
58	-.0062	-.0747	.0000	-.0369	-.2329	.0000	.2359	58
59	-.0059	-.0298	.0000	.0433	-.0949	.0000	.1043	59
60	-.0027	-.0040	.0000	-.0037	-.0119	.0000	.0124	60

61	.0000	0025	.0000	.0000	-.0059	0000	0059	61
62	-.0214	0039	.0000	-.0539	-.0220	0000	0582	62
63	-.0222	-.0169	.0000	-.0565	-.1349	.0000	1462	63
64	-.0238	-.0244	0000	-.0593	-.1658	.0000	1799	64
65	-.0269	-.0381	.0000	-.0630	-.1852	0000	1958	65
66	-.0163	-.0782	0000	-.0484	-.1643	0000	1712	66
67	-.0121	-.0314	.0000	-.0265	-.1248	.0000	1276	67
68	-.0062	-.0047	.0000	-.0076	-.0110	.0000	0134	68
69	0000	0027	0000	.0000	-.0038	.0000	0036	69
70	-.0193	-.0064	0000	-.0393	-.0470	0000	0613	70
71	-.0206	-.0188	.0000	-.0423	-.0887	.0000	0982	71
72	-.0216	-.0244	.0000	-.0454	-.1175	.0000	1260	72
73	-.0237	-.0378	.0000	-.0504	-.1385	0000	1455	73
74	-.0225	-.0770	0000	-.0498	-.1428	0000	1510	74
75	-.0163	-.0317	.0000	-.0300	-.1353	.0000	1386	75
76	-.0090	-.0049	0000	-.0104	-.0102	0000	0146	76
77	0000	.0022	.0000	0000	-.0026	.0000	.0028	77
78	-.0191	-.0165	0000	-.0287	-.0488	0000	0566	78
79	-.0191	-.0247	.0000	-.0303	-.0695	0000	0756	79
80	-.0216	-.0362	.0000	-.0345	-.0862	0000	0929	80
81	-.4070	-.2112	.0000	-.4212	-.2503	0000	4900	81
82	2907	-.2664	0000	2820	-.3277	0000	4323	82
83	.7520	-.0492	0000	7504	-.0533	.0000	7523	83
84	.0000	0924	.0000	0000	0691	.0000	0891	84
85	-.0167	-.0248	0000	-.0201	-.0419	.0000	0465	85
86	-.0186	-.0347	0000	-.0244	-.0551	0000	0602	86
87	-.0160	-.3392	0000	-.0205	-.3669	0000	.3575	87
88	.0005	-.5283	.0000	-.0034	-.5344	0000	5344	88
89	5899	-.1008	.0000	.5867	-.1032	0000	5977	89
90	0000	2419	0000	0000	2402	0000	2402	90
91	.0215	-.0343	0000	.0215	-.0343	.0000	0405	91
92	.0188	-.3401	.0000	0188	-.3401	0000	3405	92
93	.0202	-.5315	0000	.0202	-.5316	.0000	5319	93
94	2880	-.2283	0000	2880	-.2283	0000	3675	94
95	0000	.3365	0000	0000	3665	0000	3665	95

STRUCTURAL ELEMENTS - LINEAR ELASTIC

BAR ELEMENTS--INTERNAL MEMBER FORCES

ELEMENT NO.	AXIAL FORCE
INCREMENTAL VALUES	
1	-.1324
2	-.1328
3	-.0342
4	-.0432
5	-.0068
6	.0687
7	0690
8	.2359
9	.1030
10	-.0092
11	0016
TOTAL VALUES	
1	-.8002
2	-.7672
3	-.2091
4	0101
5	.2564
6	6717
7	.7206
8	.8593
9	4083
10	.0201
11	0209

FOUR NODE SOLID ELEMENTS - MODULI AND STRAINS (STRAINS IN PERCENT)

ELE	ELAS MOD	BULK MOD	SHEAR MOD	POIS	EPS-X	EPS-Y	GAM-XY	EPS-1	EPS-3	GAMMAX	ELE
1	540 4	342 4	233 0	160	003	006	001	006	003	003	1
2	503.8	317.8	217 8	.158	-.001	001	018	009	-.009	018	2
3	523.0	327 9	228 5	.158	022	-.022	051	034	-.033	.067	3
4	.8	17.2	.2	494	1 534	-.353	2.224	2 049	-.568	2 916	4
5	.7	17 3	2	494	838	503	6 510	3 874	-2 835	6 510	5
6	.7	18 0	2	494	-.683	2 467	5.570	4.092	-2 304	6 399	6
7	.7	18 4	2	493	-1.201	3 306	2.923	3.739	-1.634	5.373	7
8	.8	17 0	2	.494	-.750	1 828	-.960	1.914	-.837	2.751	8
9	473 1	344 3	194 2	218	002	120	-.003	120	002	119	9
10	472.2	362 6	190 9	.237	-.010	.133	020	133	-.010	204	10
11	478.5	372 5	191 7	243	-.008	205	-.031	212	-.013	225	11
12	512.8	365.3	211 8	.210	015	.106	-.048	112	009	102	12
13	518 4	308 6	230 5	127	013	008	001	013	008	008	13
14	378.0	223 4	168 2	123	-.010	.010	036	007	-.027	034	14
15	1 7	13 5	6	478	728	-.880	1 983	1 203	-1.337	2.540	15
16	7.2	16 7	2 5	424	2 298	-1 290	2 820	2.784	-1.778	4.563	16
17	1 6	17 0	5	485	1 179	442	3 592	2 644	-1 023	3 667	17
18	.6	17.2	2	.494	-.933	2 828	3 258	3.436	-1 540	4.976	18
19	.6	17 1	2	.494	-1 687	3.555	4 534	4 399	-2.532	6.931	19
20	.7	18 2	2	.494	-1 568	4 252	2 591	4 527	-1 843	6 370	20
21	.6	17 1	2	494	-.970	2 781	1 578	2 940	-1 129	4 069	21
22	431 4	346 2	172 4	251	-.014	261	029	261	-.015	296	22
23	408.3	307 7	165 0	.232	-.005	238	-.109	250	-.016	286	23
24	460 0	312.4	193 1	191	031	114	-.058	.124	022	102	24
25	352 1	218 3	153 2	149	053	-.007	071	069	-.024	093	25
26	.0	.1	.0	495	324	-.352	1 276	708	-.736	1.445	26
27	.0	1	0	495	1.032	-1 009	588	1.075	-1 052	2.127	27
28	2 2	13.6	.8	472	850	-.505	-.905	987	-.642	1.629	28
29	1 7	14 6	6	480	539	895	-.558	1 047	387	880	29
30	.5	15 2	.2	.454	-.357	2 153	-2 831	2 768	-.994	3.763	30
31	.6	15 8	2	494	-.786	2 856	-3 939	3 721	-1 631	5 351	31
32	.6	15.5	2	494	-1 118	3.036	-4 594	4 058	-2 137	6 195	32
33	7	17 7	2	494	-1 330	4 792	-1 678	4 932	-1 470	6 403	33
34	.7	17 2	2	.493	-.175	3 631	-.311	3.637	-.181	3.818	34
35	289.7	256 2	113 3	.279	-.007	476	-.115	.482	-.014	496	35
36	344 8	217.0	149.1	156	007	083	-.004	083	007	.076	36
37	445 7	456 2	152 8	314	184	-.080	-.691	428	-.304	733	37
38	455.4	455 6	173.9	.310	710	1.115	5.366	3 603	-1 776	5.381	38
39	471.9	459.0	181 1	.303	-.460	2.793	5 541	4.379	-2 046	6 425	39
40	196.4	421.7	69 3	418	-.747	3.881	2 014	4.071	-.958	5 029	40
41	173 8	418 9	60 9	427	-.885	4 435	-.310	4 499	-.680	5 189	41
42	356.5	442.7	132.1	351	-.617	3 842	035	3 842	-.617	4.459	42
43	443 6	454.9	168 7	.315	-.646	3 289	-2 878	3 741	-1 118	4.858	43
44	805 0	729 6	313 2	285	288	1 759	-2 154	2 328	-.281	2.609	44
45	1304 9	754 7	587 3	111	-.031	085	015	066	-.031	097	45
46	382 4	446.2	142 7	340	-.015	027	166	093	-.080	173	46
47	1	4.0	0	495	-.002	034	634	.334	-.302	635	47
48	315.9	437 1	115 5	.368	-.017	062	505	278	-.233	511	48
49	1	4 0	0	495	-.154	084	922	429	-.519	947	49
50	1	4 0	0	.495	-.192	162	955	.494	-.525	1 019	50
51	815.8	613 7	331 7	.230	-.224	2.816	082	2 818	-.225	3.041	51
52	636.2	554.5	249 5	275	-.189	2 739	-.419	2 754	-.203	2 957	52
53	902 7	582 7	386 3	169	-.071	072	046	075	-.074	150	53
54	189.9	420 9	66.6	421	036	-.015	069	.062	-.040	102	54
55	385.9	448.1	148 4	.334	046	008	049	058	-.004	062	55
56	508.5	464 8	198 0	287	.086	006	096	108	-.017	125	56
57	1	4 0	0	495	-.102	084	572	292	-.310	601	57
58	1514.9	627 3	706.7	.072	-.223	2.716	864	2 755	-.260	3.015	58
59	2192.5	1096.3	1096.3	000	-.208	2 672	-.633	2 707	-.243	2 949	59
60	483.7	457 8	177.5	308	-.111	.084	060	.088	-.115	.203	60
61	1	4 0	0	.495	047	-.035	183	.106	-.095	.201	61
62	339.0	440.2	124 8	358	035	.004	043	046	-.007	054	62
63	454 3	456.4	173 4	310	076	-.056	120	099	-.079	.179	63
64	.1	4.0	0	495	2 404	6.654	20 437	14.966	-5 909	20 874	64
65	1	4 0	0	.495	-4 471	19 781	4.300	19 970	-4 660	24 631	65
66	1	4 0	.0	495	-3 003	15 297	-55 326	35 284	-22.990	58.274	66
67	1	4 0	0	495	4.628	-2 250	-38 989	20 973	-18 598	39 571	67
68	148.0	415 6	51 5	438	013	007	-.007	015	.005	010	68
69	363 4	443.6	134 8	348	089	-.074	085	099	-.085	184	69
70	1	4 0	0	495	2 387	6 328	-16 706	12.940	-4 225	17 165	70
71	1	4 0	0	495	-4 481	19 541	-3 638	19 677	-4 618	24 295	71
72	1	4.0	0	495	-6 597	15 736	18 608	19 106	-9 965	29 071	72
73	1	4 0	0	495	8 374	-4 866	5 087	8.846	-5.338	14 184	73
74	1	4 0	0	495	.073	-.036	-3 865	1 952	-1.915	3.866	74
75	527 9	487 4	208 3	278	000	027	187	098	-.071	169	75
76	446.5	455 6	170 9	312	-.119	207	-.159	235	-.147	381	76
77	1	4.0	0	495	-5 358	6 537	9 546	8.215	-7 035	15 251	77
78	1	4.0	0	.495	5 487	-.854	9 112	7 867	-3 234	11 102	78

FOUR NODE SOLID ELEMENTS - STRESSES

ELE	SIG-X	SIG-Y	TAU-XY	SIG-1	SIG-3	TAU-MAX	THETA	SIG1/SIG3	LEVEL	ELE
1	.285	518	001	518	285	127	282	1.958	082	1
2	233	481	040	487	227	130	8 888	2 151	088	2
3	.348	378	119	482	.241	120	41 272	1.997	080	3
4	375	548	004	548	375	088	1 481	1 459	1 725	4
5	381	561	013	562	.380	091	4 248	1 478	1 815	5
6	470	663	012	664	469	097	3 558	1 414	1 945	6
7	526	725	007	.725	525	100	1 899	1 380	1 898	7
8	347	538	-.002	538	347	095	-.559	1 548	1 906	8
9	333	986	-.009	986	333	327	-.782	2 963	195	9
10	387	1 378	037	1 380	396	492	2 134	3 484	276	10
11	447	1 460	-.156	1 484	423	531	-8 641	3 508	289	11
12	390	940	-.102	958	372	293	-10 191	2 576	168	12
13	205	.307	003	307	205	051	1 622	1 498	035	13
14	087	225	081	248	085	092	20 662	3 843	077	14
15	078	156	008	156	078	039	5 770	2.018	788	15
16	280	288	029	313	255	029	41 054	1 228	577	16
17	340	422	011	424	339	042	7 350	1 251	849	17
18	375	479	007	479	375	052	3 708	1 280	1 047	18
19	367	478	009	478	367	056	4 845	1 305	1 117	19
20	511	626	006	626	511	058	3 119	1 226	1 154	20
21	361	466	003	467	361	053	1 748	1 294	1 060	21
22	375	1 530	017	1 532	373	579	2 350	4 105	332	22
23	331	1 250	-.162	1 284	298	494	-10 797	4 338	308	23
24	328	693	-.112	725	298	214	-15 758	2 445	133	24
25	252	089	123	318	023	148	61 733	14 011	133	25
26	001	001	000	001	001	000	58 238	1 588	004	26
27	051	000	-.005	.051	000	026	-83 960	-133 788	-1 000	27
28	082	029	-.027	093	018	038	-68 879	5 322	757	28
29	165	245	-.001	245	165	040	-.598	1 489	805	29
30	[illegible]	206	-.008	307	207	050	-4 660	1 482	998	30
31	254	354	-.011	355	253	051	-6 087	1 404	1 022	31
32	227	328	-.018	329	224	052	-10 230	1 468	1 048	32
33	460	598	-.008	598	489	055	-3 082	1 223	1 090	33
34	494	589	-.002	589	494	047	-1 055	1 192	947	34
35	502	1 742	-.134	1 757	486	634	-6 079	3 601	325	35
36	070	331	-.007	331	070	130	-1 488	4 725	109	36
37	581	106	-.171	638	051	293	-72 081	12 587	4 307	37
38	252	121	080	275	097	089	68 697	2 829	680	38
39	112	292	147	375	029	173	29 249	12 889	4 419	39
40	-.034	283	-.006	283	-.094	188	-.841	-3 023	-1 000	40
41	-.419	244	-.017	244	-.419	332	-1 475	-.583	-1 000	41
42	-.484	424	196	486	-.505	485	11 909	-.921	-1 000	42

43	-.051	1 070	-.836	1.357	-.338	.848	-24.298	-4.017	-1 000	43
44	.215	1 130	126	1 147	198	475	7.704	5.803	1 745	44
45	-.135	.428	086	437	-.143	290	6.759	-3.058	-1 000	45
46	-.002	.080	033	.074	-.016	045	23.120	-4.513	-1 000	46
47	102	127	143	.257	-.029	143	42.476	-8 884	-1 000	47
48	113	406	318	608	-.089	349	32 571	-6 801	-1 000	48
49	-.067	138	.151	.218	-.147	.182	-27 929	-1.483	-1 000	49
50	029	337	-.078	355	009	173	-12 994	41.220	14 951	50
51	-.069	1 110	-.387	1 226	-.185	703	-18.857	-8.841	-1 000	51
52	-.206	785	044	787	-.208	497	2 558	-3 779	-1 000	52
53	-.426	386	145	424	-.452	438	9 942	-.937	-1 000	53
54	175	.071	112	247	-.001	124	57 465	-264.998	-1.000	54
55	418	.200	128	475	141	.167	65.089	3.380	885	55
56	726	248	247	831	144	344	67 038	5 785	1 779	56
57	109	227	-.131	.312	024	144	-32.934	12 983	4 447	57
58	-.922	993	-.389	1 082	-.998	1 034	-11 066	-1 071	-1 000	58
59	-1.850	820	190	834	-1.844	1 339	4.083	-.452	-1 000	59
60	-.140	222	114	242	-.459	350	9 540	-.528	-1 000	60
61	060	.029	043	064	-.005	045	51 908	-17 914	-1 000	61
62	274	150	098	328	.096	.116	61 096	3.413	897	62
63	.441	-.128	286	.548	-.233	.390	68 484	-2.341	-1 000	63
64	477	551	-.081	603	425	089	-32 712	1 421	156	64
65	609	712	-.023	717	605	056	-12.074	1 186	069	65
66	538	595	-.016	599	534	032	-14 628	1 121	.045	66
67	186	285	-.007	288	185	050	-4.291	1 542	201	67
68	099	095	001	099	094	002	76 689	1 048	017	68
69	.333	-.139	153	.378	-.184	281	73 570	-2.058	-1 000	69
70	451	457	-.038	[illegible]	.415	039	-42.743	1 188	070	70
71	677	733	-.012	738	875	031	-11 780	1 091	034	71
72	373	407	007	409	371	019	11 542	1 102	038	72
73	.225	.269	007	270	.224	023	6 760	1 205	078	73
74	010	.018	.001	018	010	004	3 530	1 849	315	74
75	090	.219	344	504	-.196	.350	39 705	-2.578	-1 000	75
76	-.138	990	-.340	1 085	-.233	659	-15 543	-4 661	-1 000	76
77	.059	066	004	068	059	014	6.016	1.465	174	77
78	204	216	004	217	203	007	15.855	1.069	028	78

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SSTIPN· 1 LAYER OF GEOTEXTILE, P=2000 PPI, E=5%, T=0

TOTAL NUMBER OF NODES-------------------- 95
NUMBER OF BAR ELEMENTS------------------   9
NUMBER OF DIFF  BAR MATERIALS-----------   1
NUMBER OF BEAM ELEMENTS-----------------   0
NUMBER OF DIFF  BEAM MATERIALS----------   0
NUMBER OF NODAL LINKS ------------------   0
NUMBER OF INTERFACE ELEMENTS------------   0
NO  OF INTERFACE ELE  IN PREEXIST  PART    0
NUMBER OF INTERFACE ELE. IN FOUNDATION-    0
NUMBER OF INTERFACE MATERIALS-----------   0
TOTAL NUMBER OF SOIL ELEMENTS----------- 78
NUMBER OF DIFF. SOIL MATERIALS----------   3
NUMBER OF ELEMENTS IN FOUNDATION------- 36
NUMBER OF NODES IN FOUNDATION---------- 52
NUMBER OF PREEXISTING ELEMENTS----------   0
NUMBER OF PREEXISTING NODES-------------   0
NUMBER OF CONSTRUCTION LAYERS-----------   6
NUMBER OF LOAD CASES--------------------   1

CALING FACTOR ---------        1 00000

ATMOSPHERIC PRESSURE ---       1 05800

UNIT WEIGHT OF WATER ---         03120


OMPUTATION SEQUENCE FOR A TOTAL OF     7  INCREMENTS
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 INCREMENT NO    1       PUT ON LAYER NO    1
 INCREMENT NO    2       PUT ON LAYER NO    2
 INCREMENT NO    3       PUT ON LAYER NO    3
 INCREMENT NO    4       PUT ON LAYER NO    4
 INCREMENT NO    5       PUT ON LAYER NO    5
 INCREMENT NO    6       PUT ON LAYER NO    6
 INCREMENT NO    7       APPLY LOAD CASE    1
```

NODAL POINT INPUT DATA

NODE NUMBER	NODAL POINT COORDINATES X-ORD	Y-ORD	B.C. CODE X	Y	ZZ
1	.000	.000	1	1	1
2	10.000	.000	1	1	1
3	20.000	.000	1	1	1
4	30.000	.000	1	1	1
5	36.000	.000	1	1	1
6	42.000	.000	1	1	1
7	50.000	.000	1	1	1
8	54.000	.000	1	1	1
9	58.000	.000	1	1	1
10	66.000	.000	1	1	1
11	74.000	.000	1	1	1
12	82.000	.000	1	1	1
13	90.000	.000	1	1	1
14	.000	4.000	1	0	1
15	10.000	4.000	0	0	0
16	20.000	4.000	0	0	0
17	30.000	4.000	0	0	0
18	36.000	4.000	0	0	0
19	42.000	4.000	0	0	0
20	50.000	4.000	0	0	0
21	54.000	4.000	0	0	0
22	58.000	4.000	0	0	0
23	66.000	4.000	0	0	0
24	74.000	4.000	0	0	0
25	82.000	4.000	0	0	0
26	90.000	4.000	1	0	1
27	.000	7.000	1	0	1
28	10.000	7.000	0	0	0
29	20.000	7.000	0	0	0
30	30.000	7.000	0	0	0
31	36.000	7.000	0	0	0
32	42.000	7.000	0	0	0
33	50.000	7.000	0	0	0
34	54.000	7.000	0	0	0
35	58.000	7.000	0	0	0
36	66.000	7.000	0	0	0
37	74.000	7.000	0	0	0
38	82.000	7.000	0	0	0
39	90.000	7.000	1	0	1
40	.000	10.000	1	0	1
41	10.000	10.000	0	0	0
42	20.000	10.000	0	0	0
43	30.000	10.000	0	0	0
44	36.000	10.000	0	0	0
45	42.000	10.000	0	0	0
46	50.000	10.000	0	0	0
47	54.000	10.000	0	0	0
48	58.000	10.000	0	0	0
49	66.000	10.000	0	0	0
50	74.000	10.000	0	0	0
51	82.000	10.000	0	0	0
52	90.000	10.000	1	0	1
53	36.000	11.500	0	0	0
54	42.000	11.500	0	0	0
55	50.000	11.500	0	0	0
56	54.000	11.500	0	0	0
57	58.000	11.500	0	0	0
58	66.000	11.500	0	0	0
59	74.000	11.500	0	0	0
60	82.000	11.500	0	0	0
61	90.000	11.500	1	0	1
62	42.000	13.000	0	0	0
63	50.000	13.000	0	0	0
64	54.000	13.000	0	0	0
65	58.000	13.000	0	0	0
66	66.000	13.000	0	0	0
67	74.000	13.000	0	0	0
68	82.000	13.000	0	0	0
69	90.000	13.000	1	0	1
70	46.000	14.000	0	0	0
71	50.000	14.000	0	0	0
72	54.000	14.000	0	0	0
73	58.000	14.000	0	0	0
74	66.000	14.000	0	0	0
75	74.000	14.000	0	0	0
76	82.000	14.000	0	0	0
77	90.000	14.000	1	0	1
78	50.000	15.000	0	0	0
79	54.000	15.000	0	0	0
80	58.000	15.000	0	0	0
81	66.000	15.000	0	0	0
82	74.000	15.000	0	0	0
83	82.000	15.000	0	0	0
84	90.000	15.000	1	0	1
85	54.000	16.000	0	0	0
86	58.000	16.000	0	0	0
87	66.000	16.000	0	0	0
88	74.000	16.000	0	0	0
89	82.000	16.000	0	0	0
90	90.000	16.000	1	0	1
91	58.000	17.000	0	0	0
92	66.000	17.000	0	0	0
93	74.000	17.000	0	0	0
94	82.000	17.000	0	0	0
95	90.000	17.000	1	0	1

BAR ELEMENTS-------

MATERIAL NUMBER	E	AREA	WEIGHT/LENGTH
1	240	1.00	0

ELMT NO	CONNECTED NODES I	J	MATL NO
1	43	44	1
2	44	45	1
3	45	46	1
4	46	47	1
5	47	48	1
6	48	49	1
7	49	50	1
8	50	51	1
9	51	52	1

SOIL MATERIAL PROPERTY DATA

		YOUNG'S MODULUS			BULK MODULUS		STRENGTH PARAMETERS			
MATL	UNIT WT	CONSTANT	EXPONENT	RATIO	CONSTANT	EXPONENT	C	PHI	DPHI	KO
1	0880	6000.00	.500	.500	1500.00	.800	00	35.00	00	.50
2	0530	40 00	300	900	20 00	200	05	00	00	50
3	.0800	1000 00	400	700	500 00	500	.50	40 00	00	50

FOUR NODES SOLID ELEMENT DATA

ELET NO	CONNECTED NODES I	J	K	L	MATL NO	ELEMENT CENTER COORDINATES X-ORD	Y-ORD
1	1	2	15	14	3	5 000	2.000
2	2	3	16	15	3	15 000	2 000
3	3	4	17	16	3	25 000	2 000
4	4	5	18	17	2	33.000	2 000
5	5	6	19	18	2	39.000	2 000
6	6	7	20	19	2	46.000	2 000
7	7	8	21	20	2	52 000	2 000
8	8	9	22	21	2	58.000	2.000
9	9	10	23	22	3	62.000	2.000
10	10	11	24	23	3	70.000	2.000
11	11	12	25	24	3	78 000	2 000
12	12	13	26	25	3	86.000	2 000
13	14	15	28	27	3	5.000	5.500
14	15	16	29	28	3	15 000	5 500
15	16	17	30	29	2	25 000	5 500
16	17	18	31	30	2	33.000	5 500
17	18	19	32	31	2	39.000	5 500
18	19	20	33	32	2	46.000	5.500
19	20	21	34	33	2	52 000	5.500
20	21	22	35	34	2	58.000	5.500
21	22	23	36	35	2	62.000	5 500
22	23	24	37	36	3	70.000	5.500
23	24	25	38	37	3	78.000	5 500
24	25	26	39	38	3	86 000	5 500
25	27	28	41	40	3	5 000	8 500
26	28	29	42	41	2	15.000	8.500
27	29	30	43	42	2	25.000	8.500
28	30	31	44	43	2	33.000	8.500
29	31	32	45	44	2	39 000	8 500
30	32	33	46	45	2	46 000	8.500
31	33	34	47	46	2	52.000	8.500
32	34	35	48	47	2	58.000	8.500
33	35	36	49	48	2	62 000	8 500
34	36	37	50	49	2	70.000	8.500
35	37	38	51	50	3	78 000	8 500
36	38	39	52	51	3	86.000	8.500
37	43	44	53	53	1	34 500	10 750
38	44	45	54	53	1	39 000	10.750
39	45	46	55	54	1	46.000	10 750
40	46	47	56	55	1	52 000	10.750
41	47	48	57	56	1	58 000	10 750
42	48	49	58	57	1	62 000	10 750
43	49	50	59	58	1	70.000	10 750
44	50	51	60	59	1	78.000	10 750
45	51	52	61	60	1	86 000	10 750
46	53	54	62	62	1	40.500	12 250
47	54	55	63	62	1	46 000	12.250
48	55	56	64	63	1	52 000	12 250
49	56	57	65	64	1	58 000	12 250
50	57	58	66	65	1	62.000	12 250
51	58	59	67	66	1	70 000	12 250
52	59	60	68	67	1	78 000	12.250
53	60	61	69	68	1	86 000	12 250
54	62	63	71	70	1	47.000	13.500
55	63	64	72	71	1	52 000	13.500
56	64	65	73	72	1	58.000	13.500
57	65	66	74	73	1	62 000	13 500
58	66	67	75	74	1	70 000	13 500
59	67	68	76	75	1	78 000	13 500
60	68	69	77	76	1	86.000	13 500
61	70	71	79	78	1	49 000	14 500
62	71	72	79	78	1	52 000	14.500
63	72	73	80	79	1	58 000	14 500
64	73	74	81	80	1	62 000	14 500
65	74	75	82	81	1	70 000	14 500
66	75	76	83	82	1	78.000	14 500
67	73	77	84	83	1	86.000	14 500
68	78	79	85	85	1	53 000	15 500
69	79	80	86	85	1	58 000	15 500
70	80	81	87	86	1	62.000	15 500
71	81	82	88	87	1	70 000	15 500
72	82	83	89	88	1	78 C00	15.5C0
73	83	84	90	89	1	86 000	15 500
74	85	86	91	91	1	57 000	16 500
75	86	87	92	91	1	62 000	16 500
76	87	88	93	92	1	70 000	16 500
77	88	89	94	93	1	78 000	16 500
78	89	90	95	94	1	86.000	16 500

CONSTRUCTION LAYER INFORMATION

```
SSTIPN  1 LAYER OF GEOTEXTILE, P=2000 PPI, E=5%, T=0

*****************************************************
*****************************************************
*                                                   *
*  LOAD CASE -----------------------------    1     *
*                                                   *
*****************************************************
*****************************************************

LARGEST ELE  NO   IN THIS INCREMENT   78

LARGEST N P  NO   IN THIS INCREMENT   95


BAND WIDTH------------------------  40

TOTAL NUMBER OF EQUATIONS--------- 222

NUMBER OF EQUATIONS IN BLOCK------  85

NUMBER OF BLOCKS------------------   3

NUMBER OF N P  FORCE CARDS--------   3

NUMBER OF PRESSURE CARDS---------- 0
```

NODAL POINT FORCES (WEIGHTS OF ADDED ELEMENTS)

NP	X-FORCE	Y-FORCE
1	0.	0
2	0.	0
3	0.	0
4	0.	0
5	0.	0.
6	0.	0
7	0.	0
8	0.	0
9	0.	0
10	0.	0
11	0.	0
12	0.	0
13	0.	0.
14	0.	0
15	0.	0
16	0.	0
17	0.	0
18	0.	0
19	0.	0
20	0.	0
21	0.	0
22	0.	0
23	0.	0
24	0.	0
25	0.	0
26	0.	0
27	0.	0
28	0.	0
29	0.	0
30	0.	0
31	0.	0
32	0.	0
33	0.	0
34	0.	0
35	0.	0
36	0.	0
37	0.	0
38	0.	0
39	0.	0
40	0.	0
41	0.	0
42	0.	0
43	0.	0
44	0.	0
45	0.	0
46	0.	0
47	0.	0
48	0.	0
49	0.	0
50	0.	0
51	0.	0
52	0.	0
53	0.	0
54	0.	0
55	0.	0
56	0.	0
57	0.	0
58	0.	0
59	0.	0
60	0.	0
61	0.	0
62	0.	0
63	0.	0
64	0.	0
65	0.	0
66	0.	0
67	0.	0
68	0.	0
69	0.	0
70	0.	0
71	0.	0
72	0.	0
73	0.	0
74	0.	0
75	0.	0
76	0.	0
77	0.	0
78	0.	0
79	0.	0
80	0.	0
81	0.	0
82	0.	0
83	0.	0
84	0.	0
85	0.	0
86	0.	0
87	0.	0.
88	0.	0
89	0.	0
90	0.	0
91	0.	0
92	0.	-4.50
93	0.	-4.50
94	0.	-2.00
95	0.	0

LOAD CASE : 1 ITERATION : 2

NP	DELTA-X	DELTA-Y	DELTA-ZZ	X-DISP	Y-DISP	ZZ-ROTAT	TOTAL	NP
1	.0000	.0000	.0000	.0000	0000	0000	.0000	1
2	.0000	.0000	.0000	.0000	0000	0000	0000	2
3	.0000	.0000	.0000	.0000	0000	0000	0000	3
4	0000	0000	0000	0000	0000	0000	0000	4
5	.0000	0000	.0000	0000	0000	.0000	.0000	5
6	.0000	.0000	.0000	.0000	.0000	.0000	.0000	6
7	0000	.0000	0000	.0000	0000	0000	0000	7
8	0000	0000	0000	0000	0000	0000	0000	8
9	.0000	0000	0000	0000	0000	0000	0000	9
10	0000	.0000	.0000	.0000	0000	.0000	.0000	10
11	.0000	.0000	.0000	.0000	0000	.0000	.0000	11
12	0000	0000	0000	0000	0000	0000	.0000	12
13	0000	.0000	.0000	.0000	0000	0000	0000	13
14	.0000	.0000	.0000	.0000	0000	0000	0000	14
15	.0000	0000	.0000	-.0001	0000	0000	.0001	15
16	0000	0000	0000	- 0002	- 0005	0000	0006	16
17	-.0003	.0001	0000	- 0045	0020	.0000	.0049	17
18	-.0133	.0085	0000	-.1909	0345	.0000	.1940	18
19	-.0289	.0029	.0000	-.2771	- 0893	.0000	.2857	19
20	- 0301	- 0080	0000	- 1892	- 1237	0000	2098	20
21	-.0192	-.0147	.0000	-.0689	- 1427	.0000	1585	21
22	-.0005	-.0004	.0000	- 0003	- 0053	.0000	.0053	22
23	-.0010	- 0019	.0000	-.0004	- 0051	0000	0051	23
24	0008	- 0059	0000	0011	- 0109	0000	0110	24
25	0021	-.0020	.0000	.0020	- 0053	0000	0056	25
26	.0000	.0005	.0000	0000	-.0025	.0000	.0025	26
27	.0000	.0000	.0000	.0000	0001	.0000	.0001	27
28	0000	0000	0000	0000	- 0001	0000	0002	28
29	- 0001	.0000	.0000	-.0011	- 0001	0000	0011	29
30	-.0113	.0026	.0000	-.1583	0515	0000	1664	30
31	-.0198	0127	.0000	-.2468	0579	0000	.2557	31
32	- 0358	0109	0000	- 3234	- 1159	0000	3438	32
33	- 0852	- 0110	.0000	-.2878	- 2411	.0000	3753	33
34	- 0770	-.0157	0000	-.2528	- 2387	0000	3481	34
35	-.0788	- 0319	0000	-.1825	- 1778	0000	2548	35
36	- 0007	- 0045	0000	0014	- 0130	0000	0131	36
37	0018	-.0115	.0000	0018	- 0200	.0000	.0201	37
38	0023	- 0037	0000	.0014	- 0103	0000	0104	38
39	.0000	0019	.0000	.0000	- 0043	0000	0043	39
40	0000	0000	0000	0000	0001	0000	0001	40
41	.0000	0000	.0000	.0001	- 0002	0000	.0002	41
42	- 0053	.0033	.0000	- 0678	0234	0000	0715	42
43	-.0210	.0056	.0000	- 1744	0770	0000	1906	43
44	- 0217	0153	0000	- 1737	0868	0000	1861	44
45	-.0219	.0166	.0000	-.1848	- 1578	0000	2279	45
46	-.0223	-.0121	0000	-.1408	-.3264	.0000	3555	46
47	-.0221	-.0157	.0000	-.1195	-.3187	.0000	.3385	47
48	- 0224	- 0378	0000	- 0983	- 2825	0000	2991	48
49	- 0065	-.0838	.0000	- 0423	-.2157	.0000	2198	49
50	-.0004	- 0292	0000	-.0071	- 0480	0000	0485	50
51	-.0008	-.0029	.0000	-.0028	- 0117	0000	0120	51
52	0000	0024	0000	0000	- 0085	0000	0085	52
53	-.0221	.0184	0000	-.4383	1041	.0000	.4504	53
54	- 0221	0165	.0000	-.3610	-.1389	0000	3868	54
55	-.0218	-.0127	.0000	-.1781	-.3054	.0000	3535	55
56	- 0187	- 0184	0000	- 1251	- 3185	0000	3422	56
57	-.0104	-.0387	.0000	-.0833	-.2887	.0000	3015	57
58	- 0108	-.0850	0000	-.0482	-.2488	0000	2515	58
59	-.0084	-.0311	.0000	.0380	- 0971	.0000	.1042	59
60	-.0037	-.0033	.0000	- 0058	- 0115	0000	0127	60
61	.0000	.0028	.0000	.0000	-.0087	0000	0087	61
62	-.0220	.0165	.0000	-.0581	-.0085	.0000	.0585	62
63	-.0211	-.0129	.0000	- 0585	-.1323	0000	.1447	63
64	-.0202	-.0178	.0000	-.0594	- 1601	.0000	1708	64
65	-.0154	- 0413	0000	- 0555	- 1889	0000	1950	65
66	- 0204	- 0875	0000	- 0558	- 1787	0000	1871	66
67	-.0158	- 0330	.0000	- 0318	- 1268	0000	1305	67
68	-.0075	-.0043	0000	-.0095	-.0111	.0000	0145	68
69	.0000	.0026	.0000	0000	- 0047	0000	.0047	69
70	- 0179	.0018	0000	- 0388	- 0358	0000	0527	70
71	- 0191	-.0128	.0000	-.0438	- 0887	0000	.0970	71
72	- 0208	- 0180	.0000	-.0474	- 1100	0000	1197	72
73	- 0274	- 0371	0000	- 0559	- 1380	0000	1471	73
74	- 0278	- 0884	0000	- 0561	- 1574	0000	1671	74
75	- 0210	- 0333	0000	-.0354	- 1369	0000	1414	75
76	-.0100	-.0048	.0000	- 0118	- 0106	0000	0158	76
77	0000	0021	.0000	0000	- 0038	0000	0038	77
78	- 0161	- 0125	0000	- 0288	-.0482	0000	0561	78
79	-.0185	-.0180	0000	-.0303	- 0659	0000	0725	79
80	- 0213	- 0358	.0000	-.0352	- 0810	0000	0976	80
81	- 0217	- 0914	0000	-.0387	- 1359	0000	1407	81
82	2472	- 2848	0000	2379	- 3509	0000	4240	82
83	.6741	- 0506	0000	.6727	- 0550	0000	6750	83
84	.0000	0858	.0000	.0000	0815	0000	0815	84
85	-.0155	-.0181	.0000	- 0202	- 0369	0000	0421	85
86	- 0170	- 0342	0000	- 0233	- 0578	0000	0622	86
87	-.0159	- 2593	0000	- 0228	- 2617	0000	2627	87
88	- 0075	- 4735	.0000	- 0120	-.5298	0000	5299	88
89	5134	- 1159	0000	5124	- 1163	0000	5259	89
90	0000	2279	0000	0000	2259	0000	2259	90
91	.0115	- 0338	.0000	.0115	- 0338	0000	0357	91
92	0119	-.2602	0000	0119	- 2602	0000	2604	92
93	.0186	- 4762	0000	.0186	- 4762	0000	4765	93
94	2621	- 2414	0000	2621	- 2414	0000	3563	94
95	.0000	.3621	.0000	0000	3621	0000	3621	95

STRUCTURAL ELEMENTS - LINEAR ELASTIC

BAR ELEMENTS--INTERNAL MEMBER FORCES

ELEMENT NO	AXIAL FORCE
INCREMENTAL VALUES	
1	- 0242
2	- 0108
3	- 0099
4	0078
5	- 0177
6	4785
7	1829
8	- 0108
9	0237
TOTAL VALUES	
1	0269
2	3642
3	7148
4	1 2754
5	1 2722
6	1 6799
7	1 0561

5 .1294
3 .0834

FOUR NODE SOLID ELEMENTS - MODULI AND STRAINS (STRAINS IN PERCENT)

ELE	ELAS MOD	BULK MOD	SHEAR MOD	POIS	EPS-X	EPS-Y	GAM-XY	EPS-1	EPS-3	GAMMAX	ELE
1	524 7	329 3	227 1	155	001	000	001	001	- 001	002	1
2	521.9	331 4	224.8	161	.001	007	.007	.008	-.001	009	2
3	541.0	338.5	234.5	164	.021	- 019	.046	.032	-.029	.061	3
4	6	17.1	2	494	1.554	- 457	2.172	2 029	-.831	2 960	4
5	6	17 2	2	494	718	435	5 716	3 938	-2 784	6 722	5
6	7	18.0	.2	494	- 674	2 413	5 919	4 207	-2.469	6 676	6
7	.7	18 4	.2	.493	-1.284	3 330	3.214	3.837	-1 761	5 598	7
8	.6	16.9	.2	.494	-.857	1.850	-.852	1 915	-.923	2.838	8
9	487.3	343 3	191 3	221	001	129	008	129	000	129	9
10	477 1	366 1	192.9	237	- 009	199	028	200	- 010	211	10
11	477 7	372 4	192 3	242	- 008	202	- 074	.208	- 012	221	11
12	503.9	358 5	208 3	209	013	098	-.042	103	.008	095	12
13	434.0	255 2	193 6	121	000	001	- 001	002	000	002	13
14	460 9	269 6	206 1	116	.006	- 008	014	.010	-.006	016	14
15	1.7	13 5	6	478	.807	- 831	2.307	1 403	-1.427	2 830	15
16	9.7	16 9	3.5	398	2.290	-1.380	3.084	2.851	-1.942	4 793	16
17	1 8	17 0	6	482	1 359	221	4 095	2 915	-1 336	4 251	17
18	6	17 1	.2	494	-.899	2.734	3.867	3.570	-1.735	5 305	18
19	6	17.1	2	494	-1 681	3.524	5.215	4 604	-2 771	7 375	19
20	7	18 2	.2	494	-1 733	4 442	3.843	4.939	-2 230	7 169	20
21	6	17 2	2	494	-1 149	3 007	1 974	3 230	-1 371	4 601	21
22	466.0	381 6	182.3	246	-.010	284	.041	286	- 012	297	22
23	403.5	303 8	164 0	230	- 005	235	- 095	244	- 014	258	23
24	430 8	293 7	180 7	192	021	112	- 045	117	016	101	24
25	408 6	229 6	186 9	093	- 001	000	001	000	- 001	001	25
26	0	1	0	495	344	- 381	989	593	- 639	1 232	26
27	3.5	13 7	1 2	457	1 320	- 816	850	1 401	- 897	2 299	27
28	2 7	13 7	9	466	730	- 406	- 999	918	- 594	1 513	28
29	1 3	14 2	5	484	565	713	- 461	881	397	484	29
30	.5	15 1	2	494	- 373	2 116	-3 258	2 921	-1 178	4 099	30
31	.6	15 8	.2	494	- 703	2 755	-4.841	4 001	-1 949	5 950	31
32	.6	15 6	2	494	-1 141	3 078	-4 786	4 158	-2.221	6 379	32
33	7	17 8	2	494	-1 499	5 123	-2 122	5 289	-1 665	6 954	33
34	7	17 1	2	493	- 221	3 846	- 131	3.847	- 222	4 069	34
35	274.5	245 0	107 1	281	- 028	491	- 073	494	- 028	522	35
36	349 2	217 8	151 6	152	- 009	094	012	094	- 009	103	36
37	11 9	398 6	4 0	495	009	240	17 963	9 107	-8 858	17 964	37
38	446 5	455 6	170 9	312	- 712	1 954	19 902	10 661	-9 418	20 080	38
39	1	4 0	0	495	-1 279	3 697	10 882	7 101	-4 683	11 784	39
40	289.8	431 1	97 3	387	- 914	4 069	2 337	4 330	-1 175	5 504	40
41	203 5	422 6	71 9	415	- 643	3 773	084	3 773	- 643	4 417	41
42	298 0	434 5	107 5	378	- 606	3 178	- 051	3 179	- 606	3 785	42
43	572 7	490 6	225 4	270	- 738	3 349	-3 035	3 851	-1 238	5 088	43
44	721 8	642 4	281 8	281	249	1 797	-2 138	2 343	- 297	2 639	44
45	700.8	584 2	279 9	252	- 052	080	046	084	- 056	140	45
46	11 9	398 6	4 0	495	- 011	011	460	230	- 230	460	46
47	1	4 0	0	495	- 008	028	815	418	- 397	815	47
48	256 3	429 3	92 0	393	- 066	098	225	153	- 124	277	48
49	11 3	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	49
50	1	4 0	0	495	- 079	345	797	584	- 318	903	50
51	569 1	487 0	224 1	270	- 280	2 894	010	2 894	- 280	3 154	51
52	501 6	463 4	194 4	290	- 218	2 784	- 351	2 775	- 228	3 003	52
53	553 6	471 8	218 2	289	- 091	093	074	100	- 099	194	53
54	120 9	412 5	41 7	450	037	- 023	182	106	- 093	201	54
55	479 3	460 1	184 4	300	034	015	089	070	- 020	081	55
56	1	4 0	0	495	037	- 187	1 162	517	- 667	1 184	56
57	1	4 0	0	495	- 002	- 100	1 423	662	- 764	1 428	57
58	1583 4	884 3	737 6	073	- 243	2 738	533	2 762	- 267	3 028	58
59	1380 5	791 8	624 2	106	- 251	2 694	- 632	2 728	- 285	3 013	59
60	446 2	455 3	169 8	313	- 130	104	055	107	- 133	240	60
61	60 0	405 4	20 4	475	081	- 039	468	258	- 215	473	61

62	252.6	428.8	90.5	.394	047	- 013	- 005	047	- 014	.061	62
63	430.8	453.0	163.2	.320	140	- 060	.094	.150	-.071	.221	63
64	268.9	429.6	93.0	392	007	.114	010	114	008	.108	64
65	.1	4.0	.0	495	-1 802	14.317	-12 531	16.468	-3 951	20.417	65
66	.1	4.0	.0	495	-2 817	16.460	-49.668	33.469	-19 827	53.296	66
67	1	4 0	.0	495	4 134	-1 848	-35 096	18 844	-16 659	35 603	67
68	165 0	417.9	57.7	431	.021	.011	-.158	.096	- 064	.160	68
69	377 3	445.5	140.5	.342	078	- 078	100	.093	-.091	.184	69
70	1	4.0	.0	495	001	8.319	1.247	8 365	-.045	8.411	70
71	1	4 0	.0	495	-1 766	20 136	15 170	22 507	-4 136	26 643	71
72	1	4.0	.0	495	-5.966	15 021	16 725	17 945	-8 690	26.636	72
73	.1	4.0	0	.495	7 411	-3.811	5.043	7.952	-4 352	12.304	73
74	.1	4.0	0	495	037	- 039	-2.442	1.221	-1.222	2.443	74
75	818 3	540 6	347 0	179	- 009	023	008	024	- 0	034	75
76	543.4	489.8	213 5	273	- 094	173	- 013	.173	-	266	76
77	1	4.0	0	493	-4.778	6 405	7 550	7 560	-5	13.493	77
78	1	4.0	.0	.495	4.847	- 432	8.643	8.450	-7 .35	8.485	78

FOUR NODE SOLID ELEMENTS - STRESSES

ELE	SIG-X	SIG-Y	TAU-XY	SIG-1	SIG-3	TAU-MAX	THETA	SIG1/SIG3	LEVEL	ELE
1	.243	.481	.003	.481	243	119	.814	1.976	079	1
2	250	517	016	518	249	134	3 358	2 080	088	2
3	.346	.391	110	480	.255	.113	39 049	1 883	.074	3
4	361	.533	004	.533	361	.086	1 455	1 476	1 719	4
5	367	545	014	547	.365	090	4 401	1 494	1.606	5
6	462	655	013	656	461	097	3 789	1 421	1 944	6
7	.520	.720	.007	.720	520	.100	2.086	1 385	2.003	7
8	.333	.524	-.002	.524	.333	.096	- 490	1 574	1.911	8
9	.340	1.033	.011	1.034	340	347	.890	3 043	206	9
10	413	1 425	055	1 428	411	509	3 079	3 477	281	10
11	.442	1.446	- 143	1 466	422	522	-7.956	3 475	285	11
12	362	887	- 088	901	348	277	-9 251	2.590	163	12
13	138	276	- 003	276	138	069	-1 191	2.006	052	13
14	161	253	028	261	153	054	15 763	1 709	040	14
15	.083	.170	.009	171	092	.040	6.651	1 859	792	15
16	.268	.289	.024	.293	.244	.024	44.736	1 200	467	16
17	336	413	.012	.415	.334	.041	8 488	1 243	811	17
18	369	468	008	469	365	052	4 389	1 287	1 044	18
19	.361	471	011	.472	.360	.056	5.555	1.311	1.120	19
20	515	631	009	.632	514	059	4.237	1.229	1.175	20
21	.388	.475	004	475	.388	.054	2 181	1.293	1 079	21
22	409	1 614	076	1 619	404	607	3 584	4 004	337	22
23	316	1 215	- 156	1.242	.292	.475	-9 578	4 254	.297	23
24	.273	652	-.082	.669	256	207	-11.725	2 614	135	24
25	042	091	002	091	042	025	1 810	2 187	.022	25
26	001	- 004	003	003	- 005	004	68 421	- 461	-1 000	26
27	.074	008	006	.075	008	034	85 502	8 847	.671	27
28	074	.029	-.027	.087	.016	.035	-64.721	5.296	.707	28
29	140	.223	000	223	140	041	107	1 593	.830	29
30	198	299	- 009	299	197	051	-5 127	1 517	1 020	30
31	.248	348	- 013	.349	.246	052	-7 158	1 420	1 033	31
32	230	328	- 019	332	226	053	-10 647	1.469	1.059	32
33	518	.628	-.006	628	517	.056	-3 195	1.215	1 111	33
34	523	619	001	619	523	048	625	1 184	959	34
35	440	1.731	-.066	1.733	438	646	-2.482	3.958	.348	35
36	053	.303	.010	.303	053	125	2.204	5.710	107	36
37	031	.049	- 036	.078	.003	.037	-37 960	25 129	6.969	37
38	066	136	046	159	044	057	28 217	3 619	973	38
39	032	282	068	.292	002	145	15.644	131.087	48 356	39
40	-.038	344	- 063	355	-.049	.202	-9 166	-7 293	-1.000	40
41	-.296	.287	-.010	.267	-.296	.282	-1 032	- 902	-1.000	41
42	-.274	.411	.298	.522	-.385	.454	20.494	-1.354	-1 000	42
43	-.119	1 136	-.711	1.457	- 440	949	-24.289	-3.312	-1,000	43
44	113	1 079	.183	1 113	.079	.517	10.394	14.057	4.854	44
45	-.142	425	.108	.445	- 162	.303	10.444	-2.751	-1.000	45
46	.010	028	.016	037	000	.016	29.856	82.722	30.378	46
47	087	154	120	.245	-.004	125	37 282	-63.974	-1 000	47
48	024	375	275	526	- 127	326	28 720	-4 146	-1 000	48
49	- 088	104	-.134	171	- 163	167	-26.569	-1.053	-1 000	49
50	022	.308	- 085	.320	.011	154	-10.530	27 820	9.970	50
51	120	1 185	-.383	1.287	008	.644	-17.128	158 297	58 471	51
52	- 247	766	076	771	- 253	512	4 245	-3.049	-1 000	52
53	- 329	386	.154	.418	-.361	389	11 632	-1 157	-1.000	53
54	109	.088	113	.202	-.027	115	50.422	-7.371	-1,000	54
55	.354	.223	217	.516	081	.227	53 440	6.405	2 753	55
56	161	189	051	228	123	052	37 206	1 855	318	56
57	072	.232	-.084	.268	036	116	-23.315	7 417	2.385	57
58	-1 088	1.106	- 428	1.188	-1 169	1 178	-10 865	-1 015	-1.000	58
59	-1 666	.687	281	.715	-1 695	1.205	6.250	- 422	-1.000	59
60	- 471	260	082	289	- 481	375	6 356	- 560	-1 000	60
61	035	014	064	.068	- 040	085	49 646	-2.229	-1.000	61
62	279	.107	053	.294	092	.101	74.287	3 198	817	62
63	806	.030	242	.875	- 039	.457	74.031	-22 510	-1 000	63
64	447	673	- 082	689	432	128	-14 361	1 595	221	64
65	509	539	-.005	.540	.509	016	-9 253	1 062	023	65
66	553	.586	- 020	.595	544	.026	-25.374	1 094	.035	66
67	199	.292	- 012	.293	197	.048	-7 112	1 487	181	67
68	184	118	- 077	235	067	084	-56 509	3 502	930	68
69	260	-.180	151	298	-.228	263	72 423	-1 310	-1 000	69
70	420	.446	- 034	469	396	037	-34 488	1 185	069	70
71	741	.775	006	776	740	018	9 670	1 049	018	71
72	370	403	007	405	368	018	10 784	1 098	037	72
73	231	257	003	.258	231	013	7 296	1 116	043	73
74	008	017	001	017	008	004	7 231	2 047	389	74
75	- 018	224	032	228	- 023	125	7 314	-10 126	-1 000	75
76	- 184	976	- 027	976	- 184	580	-1 321	-5 239	-1 000	76
77	077	103	003	104	077	013	6 536	1 345	128	77
78	195	208	003	208	195	007	11 247	1 071	028	78

PROGRAM SSTIPN

```
SSTIPN: 1 LAYER OF GEOTEXTILE, P=2000 PPI, E=5%, T=1000

TOTAL NUMBER OF NODES------------------ 95
NUMBER OF BAR ELEMENTS----------------   9
NUMBER OF DIFF  BAR MATERIALS----------  1
NUMBER OF BEAM ELEMENTS---------------   0
NUMBER OF DIFF. BEAM MATERIALS---------  0
NUMBER OF NODAL LINKS -----------------  0
NUMBER OF INTERFACE ELEMENTS-----------  0
NO  OF INTERFACE ELE  IN PREEXIST  PART  0
NUMBER OF INTERFACE ELE  IN FOUNDATION-  0
NUMBER OF INTERFACE MATERIALS----------  0
TOTAL NUMBER OF SOIL ELEMENTS---------- 78
NUMBER OF DIFF  SOIL MATERIALS---------  3
NUMBER OF ELEMENTS IN FOUNDATION------- 36
NUMBER OF NODES IN FOUNDATION---------- 52
NUMBER OF PREEXISTING ELEMENTS---------  0
NUMBER OF PREEXISTING NODES------------  0
NUMBER OF CONSTRUCTION LAYERS----------  6
NUMBER OF LOAD CASES-------------------  2

CALING FACTOR ---------      1 00000

ATMOSPHERIC PRESSURE ---     1.05800

UNIT WEIGHT OF WATER ---      03120


OMPUTATION SEQUENCE FOR A TOTAL OF    8  INCREMENTS
.....................................................


 INCREMENT NO    1     APPLY LOAD CASE   1

 INCREMENT NO    2     PUT ON LAYER NO   1

 INCREMENT NO    3     PUT ON LAYER NO   2

 INCREMENT NO.   4     PUT ON LAYER NO   3

 INCREMENT NO    5     PUT ON LAYER NO   4

 INCREMENT NO.   6     PUT ON LAYER NO   5

 INCREMENT NO    7     PUT ON LAYER NO   6

 INCREMENT NO    8     APPLY LOAD CASE   2
```

NODAL POINT INPUT DATA

NODE NUMBER	NODAL POINT COORDINATES X-ORD	Y-ORD	B.C. CODE X	Y	ZZ
1	.000	.000	1	1	1
2	10.000	.000	1	1	1
3	20.000	.000	1	1	1
4	30.000	.000	1	1	1
5	38.000	.000	1	1	1
6	42.000	.000	1	1	1
7	50.000	.000	1	1	1
8	54.000	.000	1	1	1
9	58.000	.000	1	1	1
10	66.000	.000	1	1	1
11	74.000	.000	1	1	1
12	82.000	.000	1	1	1
13	90.000	.000	1	1	1
14	.000	4.000	1	0	1
15	10.000	4.000	0	0	0
16	20.000	4.000	0	0	0
17	30.000	4.000	0	0	0
18	38.000	4.000	0	0	0
19	42.000	4.000	0	0	0
20	50.000	4.000	0	0	0
21	54.000	4.000	0	0	0
22	58.000	4.000	0	0	0
23	66.000	4.000	0	0	0
24	74.000	4.000	0	0	0
25	82.000	4.000	0	0	0
26	90.000	4.000	1	0	1
27	.000	7.000	1	0	1
28	10.000	7.000	0	0	0
29	20.000	7.000	0	0	0
30	30.000	7.000	0	0	0
31	38.000	7.000	0	0	0
32	42.000	7.000	0	0	0
33	50.000	7.000	0	0	0
34	54.000	7.000	0	0	0
35	58.000	7.000	0	0	0
36	66.000	7.000	0	0	0
37	74.000	7.000	0	0	0
38	82.000	7.000	0	0	0
39	90.000	7.000	1	0	1
40	.000	10.000	1	0	1
41	10.000	10.000	0	0	0
42	20.000	10.000	0	0	0
43	30.000	10.000	0	0	0
44	38.000	10.000	0	0	0
45	42.000	10.000	0	0	0
46	50.000	10.000	0	0	0
47	54.000	10.000	0	0	0
48	58.000	10.000	0	0	0
49	66.000	10.000	0	0	0
50	74.000	10.000	0	0	0
51	82.000	10.000	0	0	0
52	90.000	10.000	1	0	1
53	38.000	11.500	0	0	0
54	42.000	11.500	0	0	0
55	50.000	11.500	0	0	0
56	54.000	11.500	0	0	0
57	58.000	11.500	0	0	0
58	66.000	11.500	0	0	0
59	74.000	11.500	0	0	0
60	82.000	11.500	0	0	0
61	90.000	11.500	1	0	1
62	42.000	13.000	0	0	0
63	50.000	13.000	0	0	0
64	54.000	13.000	0	0	0
65	58.000	13.000	0	0	0
66	66.000	13.000	0	0	0
67	74.000	13.000	0	0	0
68	82.000	13.000	0	0	0
69	90.000	13.000	1	0	1
70	46.000	14.000	0	0	0
71	50.000	14.000	0	0	0
72	54.000	14.000	0	0	0
73	58.000	14.000	0	0	0
74	66.000	14.000	0	0	0
75	74.000	14.000	0	0	0
76	82.000	14.000	0	0	0
77	90.000	14.000	1	0	1
78	50.000	15.000	0	0	0
79	54.000	15.000	0	0	0
80	58.000	15.000	0	0	0
81	66.000	15.000	0	0	0
82	74.000	15.000	0	0	0
83	82.000	15.000	0	0	0
84	90.000	15.000	1	0	1
85	54.000	16.000	0	0	0
86	58.000	16.000	0	0	0
87	66.000	16.000	0	0	0
88	74.000	16.000	0	0	0
89	82.000	16.000	0	0	0
90	90.000	16.000	1	0	1
91	58.000	17.000	0	0	0
92	66.000	17.000	0	0	0
93	74.000	17.000	0	0	0
94	82.000	17.000	0	0	0
95	90.000	17.000	1	0	1

STRUCTURAL ELEMENTS - LINEAR ELASTIC

BAR ELEMENTS-------

MATERIAL NUMBER	E	AREA	WEIGHT/LENGTH
1	240	1.00	0

ELMT NO	CONNECTED NODES I	J	MATL NO
1	43	44	1
2	44	45	1
3	45	46	1
4	46	47	1
5	47	48	1
6	48	49	1
7	49	50	1
8	50	51	1
9	51	52	1

SOIL MATERIAL PROPERTY DATA

MATL	UNIT WT	YOUNG'S MODULUS CONSTANT	YOUNG'S MODULUS EXPONENT	RATIO	BULK MODULUS CONSTANT	BULK MODULUS EXPONENT	STRENGTH PARAMETERS C	PHI	DPHI	KO
1	.0880	8000.00	500	500	1500 00	800	00	35 00	.00	50
2	0530	40 00	300	900	20 00	200	05	00	00	50
3	.0800	1000.00	400	.700	500 00	500	.50	40 00	.00	50

FOUR NODES SOLID ELEMENT DATA

ELET NO	CONNECTED NODES I	J	K	L	MATL NO	ELEMENT CENTER COORDINATES X-ORD	Y-ORD
1	1	2	15	14	3	5 000	2.000
2	2	3	16	15	3	15 000	2 000
3	3	4	17	16	3	25 000	2 000
4	4	5	18	17	2	33 000	2.000
5	5	6	19	18	2	39.000	2.000
6	6	7	20	19	2	46 000	2 000
7	7	8	21	20	2	52 000	2 000
8	8	9	22	21	2	58 000	2.000
9	9	10	23	22	3	62.000	2 000
10	10	11	24	23	3	70 000	2.000
11	11	12	25	24	3	78 000	2 000
12	12	13	26	25	3	86 000	2 000
13	14	15	28	27	3	5.000	5.500
14	15	16	29	28	3	15.000	5.500
15	16	17	30	29	2	25 000	5 500
16	17	18	31	30	2	33 000	5.500
17	18	19	32	31	2	39.000	5.500
18	19	20	33	32	2	45 000	5.500
19	20	21	34	33	2	52 000	5.500
20	21	22	35	34	2	58.000	5.500
21	22	23	36	35	2	62.000	5.500
22	23	24	37	36	3	70 000	5.500
23	24	25	38	37	3	78 000	5.500
24	25	26	39	38	3	86 000	5 500
25	27	28	41	40	3	5 000	8 500
26	28	29	42	41	2	15 000	8 500
27	29	30	43	42	2	25.000	8.500
28	30	31	44	43	2	33 000	8 500
29	31	32	45	44	2	39 000	8 500
30	32	33	46	45	2	45 000	8.500
31	33	34	47	46	2	52.000	8.500
32	34	35	48	47	2	58 000	8.500
33	35	36	49	48	2	62 000	8 500
34	36	37	50	49	2	70 000	8.500
35	37	38	51	50	3	78.000	8.500
36	38	39	52	51	3	86 000	8 500
37	43	44	53	53	1	34 500	10 750
38	44	45	54	53	1	39 000	10 750
39	45	46	55	54	1	46 000	10 750
40	46	47	56	55	1	52.000	10 750
41	47	48	57	56	1	58 000	10 750
42	48	49	58	57	1	62 000	10.750
43	49	50	59	58	1	70.000	10.750
44	50	51	60	59	1	78 000	10.750
45	51	52	61	60	1	86 000	10 750
46	53	54	62	62	1	40 500	12 250
47	54	55	63	62	1	46 000	12.250
48	55	56	64	63	1	52 000	12 250
49	56	37	65	64	1	58 000	12 250
50	57	58	66	65	1	62 000	12 250
51	58	59	67	66	1	70 000	12.250
52	59	60	68	67	1	78 000	12.250
53	60	61	69	68	1	86 000	12 250
54	62	63	71	70	1	47.000	13 500
55	63	64	72	71	1	52.000	13 500
56	64	65	73	72	1	58 000	13 500
57	65	66	74	73	1	62 000	13 500
58	66	67	75	74	1	70 000	13.500
59	67	68	76	75	1	78 000	13 500
60	68	69	77	76	1	86 000	13 500
61	70	71	78	78	1	49 000	14 500
62	71	72	79	78	1	52 000	14 500
63	72	73	80	79	1	58 000	14 500
64	73	74	81	80	1	62 000	14 500
65	74	75	82	81	1	70 000	14 500
66	75	76	83	82	1	78.000	14 500
67	76	77	84	83	1	86 000	14.500
68	78	79	85	88	1	53 000	15 500
69	79	80	86	85	1	58 000	15 500
70	80	81	87	86	1	62 000	15 500
71	81	82	88	87	1	70 000	15 500
72	82	83	89	88	1	78 000	15 500
73	83	84	90	89	1	86 000	15 500
74	85	86	91	91	1	57 000	16 500
75	86	87	92	91	1	62 000	16 500
76	87	88	93	92	1	70 000	16 500
77	88	89	94	93	1	78 000	16 500
78	89	90	95	94	1	86 000	16 500

CONSTRUCTION LAYER INFORMATION

```
SSTIPN. 1 LAYER OF GEOTEXTILE, P=2000 PPI, E=5%, T=1000

*****************************************************
*****************************************************
*                                                   *
*  LOAD CASE -----------------------------   2      *
*                                                   *
*****************************************************
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LARGEST ELE  NO   IN THIS INCREMENT   78

LARGEST N P  NO   IN THIS INCREMENT   95


BAND WIDTH-----------------------  40
TOTAL NUMBER OF EQUATIONS--------- 222
NUMBER OF EQUATIONS IN BLOCK------  84
NUMBER OF BLOCKS------------------   3

NUMBER OF N P  FORCE CARDS--------   3
NUMBER OF PRESSURE CARDS----------   0
```

NODAL POINT FORCES (WEIGHTS OF ADDED ELEMENTS)

NP	X-FORCE	Y-FORCE
1	0	0
2	0	0
3	0	0
4	0	0
5	0.	0.
6	0	0
7	0.	0
8	0.	0
9	0.	0
10	0	0
11	0	0
12	0	0
13	0	0
14	0	0
15	0.	0
16	0.	0
17	0	0
18	0	0
19	0	0.
20	0	0
21	0.	0
22	0	0
23	0.	0
24	0	0
25	0	0
26	0	0
27	0.	0.
28	0.	0
29	0	0
30	0	0
31	0	0
32	0	0
33	0	0
34	0	0
35	0.	0
36	0	0
37	0	0
38	0	0
39	0.	0
40	0.	0
41	0.	0
42	0	0
43	0	0
44	0.	0
45	0.	0
46	0	0
47	0	0
48	0	0
49	0	0
50	0	0
51	0	0
52	0.	0
53	0	0
54	0	0
55	0.	0
56	0	0.
57	0.	0
58	0	0
59	0	0.
60	0.	0
61	0.	0
62	0.	0
63	0.	0.
64	0	0
65	0	0.
66	0	0
67	0.	0
68	0	0
69	0.	0
70	0	0
71	0	0
72	0	0
73	0	0
74	0	0
75	0.	0
76	0	0
77	0	0.
78	0	0
79	0	0
80	0	0
81	0	0
82	0	0
83	0	0
84	0	0
85	0.	0
86	0	0
87	0	0
88	0	0
89	0	0
90	0	0
91	0.	0
92	0	-4.50
93	0	-4.50
94	0	-2.00
95	0	0

LOAD CASE = 2 ITERATION = 2

NP	DELTA-X	DELTA-Y	DELTA-ZZ	X-DISP	Y-DISP	ZZ-ROTAT	TOTAL	NP
1	.0000	0000	.0000	.0000	0000	0000	0000	1
2	.0000	.0000	0000	.0000	0000	.0000	0000	2
3	.0000	.0000	.0000	.0000	0000	0000	0000	3
4	0000	0000	0000	0000	0000	0000	0000	4
5	.0000	0000	0000	0000	.0000	0000	0000	5
6	0000	.0000	0000	.0000	0000	.0000	.0000	6
7	0000	0000	0000	.0000	0000	0000	0000	7
8	0000	0000	0000	0000	0000	0000	0000	8
9	0000	0000	0000	.0000	0000	0000	0000	9
10	0000	.0000	0000	0000	0000	0000	0000	10
11	0000	.0000	.0000	0000	0000	0000	0000	11
12	0000	0000	0000	0000	0000	0000	0000	12
13	0000	0000	0000	.0000	0000	0000	0000	13
14	0000	.0000	0000	0000	0000	0000	0000	14
15	0000	0000	0000	-.0002	0000	0000	0002	15
16	0000	- 0001	0000	- 0004	- 0007	0000	0008	16
17	- 0007	.0002	0000	-.0052	.0025	0000	0058	17
18	- 0219	.0085	0000	-.2151	0428	0000	2193	18
19	- 0333	-.0036	0000	-.3034	- 0773	0000	3131	19
20	- 0171	- 0124	0000	- 1857	- 1342	0000	2133	20
21	- 0070	-.0075	0000	- 0646	- 1408	0000	1526	21
22	0003	.0006	0000	0006	- 0040	0000	0040	22
23	- 0010	- 0022	0000	- 0005	- 0053	0000	0054	23
24	0008	- 0057	0000	0010	- 0106	0000	0108	24
25	0022	- 0022	0000	.0020	- 0054	0000	0057	25
26	.0000	.0004	0000	.0000	- 0027	0000	0027	26
27	0000	.0000	0000	.0000	0001	.0000	0001	27
28	0000	0000	0000	0000	- 0002	0000	0002	28
29	-.0001	.0000	0000	-.0015	- 0002	.0000	0015	29
30	-.0243	0053	0000	-.2303	0702	.0000	.2408	30
31	- 0444	.0169	0000	- 3346	0750	0000	3429	31
32	- 0588	- 0055	0000	- 3884	- 1405	0000	3924	32
33	- 0486	-.0255	0000	-.2810	- 2683	0000	3885	33
34	- 0454	- 0086	0000	-.2229	- 2416	0000	3287	34
35	- 0559	-.0103	0000	- 1588	- 1533	.0000	.2208	35
36	- 0013	- 0051	0000	0006	- 0135	0000	0135	36
37	0021	-.0110	0000	0016	0197	.0000	0198	37
38	.0079	-.0041	0000	0018	- 0105	.0000	0106	38
39	0030	0017	0000	0000	- 0046	0000	0046	39
40	0000	0000	0000	0000	0001	0000	0001	40
41	.0000	.0000	.0000	.0001	- 0002	0000	0003	41
42	- 0212	.0078	.0000	-.0799	0538	.0000	0963	42
43	- 0472	0115	0000	- 2669	1194	0000	2924	43
44	- 0478	0201	.0000	-.2598	0804	0000	2687	44
45	- 0490	- 0084	.0000	-.2447	- 1974	.0000	3144	45
46	- 0464	- 0356	0000	- 2062	- 3681	0000	4229	46
47	- 0359	- 0131	0000	- 1728	- 3384	0000	3781	47
48	- 0283	0012	0000	- 1381	- 2403	0000	2762	48
49	0008	-.0664	0000	-.0571	- 2215	.0000	2288	49
50	0021	- 0294	0000	- 0189	- 0500	0000	0535	50
51	0002	- 0036	0000	-.0093	- 0135	0000	0164	51
52	0000	0023	0000	0000	- 2785	0000	2785	52
53	- 0409	0201	0000	- 4625	1194	0000	4776	53
54	-.0417	-.0078	0000	- 3851	- 1615	0000	4176	54
55	- 0529	-.0351	0000	-.2136	- 3430	.0000	4040	55
56	- 0589	- 0220	0000	- 1705	- 3437	0000	3837	56
57	- 0342	-.0111	0000	-.1234	- 2825	0000	.3083	57
58	- 0078	-.0898	0000	- 0584	-.2497	0000	.2585	58
59	- 0050	-.0319	0000	- 0173	- 0811	0000	.0827	59
60	- 0026	- 0040	0000	0094	-.0495	.0000	0504	60
61	0000	.0025	0000	.0000	- 3113	0000	3113	61
62	- 0548	- 0066	0000	- 0968	- 0293	.0000	1012	62
63	- 0642	-.0344	0000	-.1067	- 1678	0000	1988	63
64	- 0651	-.0214	0000	-.1094	- 1817	.0000	2121	64
65	- 0704	-.0256	0000	-.1142	- 1944	0000	2255	65
66	- 0195	- 0909	0000	- 0597	- 2224	0000	2303	66
67	- 0126	-.0327	.0000	.0027	- 1175	.0000	.1175	67
68	- 0082	- 0043	0000	-.0082	- 0108	.0000	0136	68
69	0000	.0025	0000	0000	- 0041	.0000	0041	69
70	- 0649	-.0195	0000	- 0894	- 0640	0000	1099	70
71	- 0676	-.0344	0000	-.0961	- 1226	0000	1558	71
72	-.0686	- 0212	0000	-.0985	- 1317	.0000	1645	72
73	- 0719	-.0248	0000	-.1035	-.1470	.0000	1798	73
74	- 0279	- 0927	0000	- 0801	- 2028	0000	2113	74
75	- 0176	- 0335	0000	- 0622	- 1285	0000	1367	75
76	- 0083	- 0047	0000	-.0102	- 0102	0000	0144	76
77	0000	0025	0000	.0000	- 0028	0000	0028	77
78	- 0715	- 0343	0000	- 0889	- 0752	.0000	1149	78
79	- 0698	-.0216	0000	- 0869	- 0721	.0000	1122	79
80	- 0714	-.0234	0000	- 0893	-.0781	0000	1186	80
81	- 4600	- 2221	0000	-.4787	- 2875	.0000	5484	81
82	2545	- 2749	0000	1875	- 3575	0000	4037	82
83	7491	- 0489	0000	7399	- 0718	0000	7434	83
84	0000	.0925	0000	.0000	0724	0000	0724	84
85	-.0694	- 0219	0000	-.0785	- 0428	0000	0876	85
86	- 0720	- 0220	0000	- 0807	- 0471	0000	0935	86
87	- 0673	-.3426	0000	-.0768	- 3673	.0000	3752	87
88	-.0530	- 5449	0000	- 0948	- 5972	0000	6049	88
89	5702	-.1023	0000	5616	- 1233	0000	5749	89
90	0000	2409	0000	0000	2223	0000	2223	90
91	- 0288	-.0217	0000	- 0288	- 0217	0000	0361	91
92	- 0336	-.3435	0000	- 0336	- 3435	0000	3452	92
93	- 0318	- 5480	0000	-.0318	- 5480	0000	5489	93
94	2586	- 2340	0000	2586	- 2340	0000	3473	94
95	0000	.3829	0000	.0000	3829	.0000	3829	95

STRUCTURAL ELEMENTS - LINEAR ELASTIC

BAR ELEMENTS--INTERNAL MEMBER FORCES

ELEMENT NO	AXIAL FORCE
INCREMENTAL VALUES	
1	- 0253
2	- 0470
3	0779
4	6267
5	5808
6	6117
7	0401
8	- 0571
9	- 0069
TOTAL VALUES	
1	2847
2	6022
3	1 0957
4	2 1271
5	2 1970
6	2 3714
7	1 1455

8	2870
9	2803

FOUR NODE SOLID ELEMENTS - MODULI AND STRAINS (STRAINS IN PERCENT)

ELE	ELAS MOD	BULK MOD	SHEAR MOD	POIS	EPS-X	EPS-Y	GAM-XY	EPS-1	EPS-3	GAMMAX	ELE
1	526 3	330 4	227 8	156	001	000	002	002	- 001	002	1
2	522.5	333 0	224.7	162	.001	009	010	.011	- 002	013	2
3	527 6	330 4	228 6	.154	024	- 023	054	037	- 035	072	3
4	.8	17 2	.2	494	1.749	- 588	2.419	2 286	-1 083	3.348	4
5	8	17 2	2	494	735	431	7 432	4 327	-3 161	7 488	5
6	7	18 0	2	494	- 860	2 644	6.219	4 461	-2 678	7.139	6
7	7	18 4	2	.493	-1 338	3 439	2.886	3.842	-1 741	5.583	7
8	6	17.0	2	494	- 741	1 811	- 987	1 903	- 833	2.738	8
9	478 0	349 7	195 9	220	007	117	007	117	007	1:0	9
10	479.2	369 3	193 5	.238	- 010	201	.028	202	- 011	213	10
11	479.1	372.8	193.0	241	- 008	202	- 072	.208	- 012	220	11
12	496 8	352.0	205.6	208	013	101	-.042	106	008	.098	12
13	436 5	256 9	194 7	121	001	002	- 002	002	000	002	13
14	463 4	271 8	207 0	119	009	- 005	019	013	- 010	024	14
15	2 1	13.6	7	.473	1 168	-1 137	3.403	2.071	-2 039	4 110	15
16	7 3	16 5	2 6	422	2 818	-1 665	5.367	3.910	-2 957	6 866	16
17	1 1	16 7	4	489	1 000	517	5 839	3 686	-2 171	5 858	17
18	6	17 2	2	494	-1 394	3 286	4.127	4 068	-2.173	6.241	18
19	8	17 1	2	.494	-2.065	3 912	4 408	4.637	-2 790	7 427	19
20	7	18 2	2	494	-1 541	4 187	2 581	4 445	-1 820	6 265	20
21	6	17 2	2	494	- 989	2 626	1 773	2 831	-1 195	4 026	21
22	464 3	369 5	186 0	.248	- 016	265	043	287	- 016	304	22
23	406.8	305 5	165 5	229	- 006	235	- 094	243	- 015	258	23
24	403.9	275 1	169 6	192	023	118	- 047	.123	017	106	24
25	408 9	229 7	187 1	093	- 001	000	001	000	- 001	001	25
26	.0	1	0	495	408	- 699	1 034	588	-1 079	1 667	26
27	4	13 4	1	494	2 079	-1 719	1 236	2.177	-1 817	3 994	27
28	2 9	13 7	1 0	464	810	- 577	- 187	816	- 583	1 399	28
29	11 9	15 9	4 4	363	139	1 192	671	1 289	042	1 248	29
30	5	15 2	2	494	- 762	2 612	-1 375	2 746	- 897	3 643	30
31	.6	15 9	2	494	-1 170	3 243	-2 779	3 644	-1 571	5 215	31
32	6	15 6	2	494	-1.258	3 029	-3 518	3 658	-1 887	5 545	32
33	7	17 8	2	494	-1 491	4 916	- 407	4 922	-1 497	6 419	33
34	.7	17 2	2	493	- 245	3 973	271	3.977	- 249	4 226	34
35	250 5	228 7	97.3	.287	- 059	555	239	577	- 082	659	35
36	370 8	228 2	161 8	145	-.048	4 615	1 602	4 783	- 216	4 999	36
37	1	4 0	0	495	- 013	246	17 380	8 808	-8 574	17 382	37
38	134 4	414 1	46 5	444	- 700	1 937	19 893	10 652	-9 415	20 067	38
39	84 3	408 2	28 8	465	-1 233	3 652	10 680	7 081	-4 663	11 744	39
40	1	4 0	0	495	- 915	4 327	2 899	4 701	-1 289	5 991	40
41	1	4 0	0	495	- 978	5 391	482	5 401	- 987	6 388	41
42	1	4 0	0	495	- 827	4 469	1 552	4 581	- 938	5 519	42
43	413.3	450 5	155 7	327	- 427	3 080	- 653	3 110	- 457	3 567	43
44	526 1	487 2	205 7	280	- 180	2 822	- 450	2 839	- 197	3 036	44
45	842 8	597 2	348 9	208	044	2 521	2 897	3 188	- 623	3 811	45
46	1	4 0	0	495	- 024	- 226	1 823	671	- 953	1 824	46
47	1	4 0	0	495	115	- 037	1 729	907	- 829	1 735	47
48	195 4	421 6	88 9	418	078	- 005	361	222	- 149	371	48
49	1	4 0	0	495	- 314	559	1 256	887	- 643	1 530	49
50	1	4 0	0	495	- 604	2 053	2 072	2 409	- 961	3 370	50
51	1313 4	809 8	572 9	148	- 532	3 841	-1 304	3 937	- 627	4 564	51
52	1669 3	930 5	760 0	092	003	2 398	-1.347	2 574	- 173	2 748	52
53	725.6	542 5	295 5	228	- 078	076	058	081	- 083	164	53
54	1	4 0	0	495	131	- 066	1 015	542	- 196	1 038	54
55	1273 3	638 0	610 3	043	042	009	024	045	005	040	55
56	80 8	407 8	27 5	488	103	- 037	364	228	- 162	390	56
57	1	4 0	0	495	- 616	099	1 306	486	-1 003	1 489	57
58	701 9	538 0	283 7	237	- 402	2 814	2 408	3 215	- 803	4 018	58
59	1255 3	778 1	546 2	149	- 159	2 723	2 004	3 037	- 474	3 511	59
60	982 5	582 1	444 8	104	- 113	071	025	072	- 114	186	60
61	1	4 0	0	495	135	- 013	1 080	611	- 489	1 100	61

62	190.9	421.0	87 2	.420	006	019	- 038	032	- 009	.041	62
63	530.9	487.9	207 7	.278	079	- 044	129	106	- 072	178	63
64	.1	4.0	.0	495	2 156	8.422	23.222	16.094	-7 816	23.810	64
65	.1	4.0	0	495	-4 163	20.908	10.185	21 901	-5.158	27 059	65
66	.1	4.0	.0	.495	-3 672	17 595	-51.290	34.724	-20.801	55.525	66
67	1	4 0	0	495	4 562	- 482	-38 437	21 424	-17 343	38 767	67
68	.1	4.0	.0	495	- 040	.027	- 320	157	-.170	327	68
69	363.9	443 6	135.0	.348	078	-.057	.076	088	-.087	.155	69
70	.1	4.0	.0	.495	2 404	5.967	-16 380	12.557	-4.186	16 743	70
71	.1	4 0	0	495	-4 255	20.591	-1 570	20 616	-4 279	24 895	71
72	.1	4 0	0	495	-7 342	18.166	21 022	21.939	-11 116	33 054	72
73	.1	4.0	0	495	8 187	-2.988	6.290	9.012	-3 794	12 806	73
74	.1	4.0	0	.495	065	-.028	-4 319	2 178	-2.141	4 320	74
75	607 5	509 0	240 3	284	001	024	169	098	- 073	171	75
76	503.9	463 6	196 4	289	- 101	186	- 208	.221	- 134	355	76
77	1	4 0	.0	.495	-5.697	6 739	9.688	8 465	-7 423	15 888	77
78	1	4.0	.0	.495	5.167	-.513	9.676	7.937	-3.283	11 220	78

FOUR NODE SOLID ELEMENTS - STRESSES

ELE	SIG-X	SIG-Y	TAU-XY	SIG-1	SIG-3	TAU-MAX	THETA	SIG1/SIG3	LEVEL	ELE
1	.245	481	005	481	245	118	1 228	1.986	078	1
2	254	529	023	531	.252	139	4 703	2 104	091	2
3	.357	.374	127	.493	.238	127	43.076	2 066	085	3
4	376	547	005	547	.376	085	1 640	1 454	1 707	4
5	389	547	015	.548	.388	099	4 879	1 492	1 810	5
6	469	664	013	665	469	098	3 934	1 419	1 964	6
7	.524	.725	008	725	524	101	1 851	1.384	2 010	7
8	346	537	- 002	537	346	095	- 577	1.550	1 904	8
9	.359	.981	011	982	358	312	.973	2 739	181	9
10	416	1 438	054	1 441	413	514	2 996	3 492	283	10
11	440	1 446	- 140	1.465	421	522	-7 768	3 483	.285	11
12	386	901	- 086	.914	.352	281	-8 953	2 598	165	12
13	140	278	- 003	278	140	069	-1 332	1 991	.052	13
14	171	280	038	285	155	055	22 043	1 709	041	14
15	105	174	018	177	102	038	12.384	1.741	.753	15
16	272	.277	037	312	.237	038	43.238	1.318	750	16
17	321	408	014	410	319	045	8 812	1 285	810	17
18	373	481	009	481	.372	055	4 552	1 293	1 091	18
19	362	475	009	476	.361	057	4.553	1 317	1 146	19
20	501	615	006	615	500	057	3 124	1 229	1 146	20
21	.331	436	.004	.436	.331	053	2.005	1 319	1.054	21
22	381	1 628	082	1 633	376	628	3 730	4 342	359	22
23	.313	1.220	- 158	1 246	287	480	-9.500	4 339	302	23
24	275	663	- 080	.679	259	210	-11 165	2 619	136	24
25	042	091	002	091	042	024	2 166	2.166	021	25
26	006	- 002	005	008	-.004	006	64.329	-2 089	-1 000	26
27	100	010	026	107	003	052	75.012	38 624	1 046	27
28	063	.039	- 031	084	.018	033	-55 719	4 633	659	28
29	177	200	005	201	176	012	12 027	1 140	247	29
30	209	323	- 006	323	209	057	-2 804	1 546	1 140	30
31	251	352	- 008	352	250	051	-4 509	1 410	1 025	31
32	203	303	- 016	.305	.200	052	-8.628	1.524	1 050	32
33	483	592	- 003	.592	.483	055	-1.684	1 227	1 096	33
34	.540	636	002	636	.540	048	914	1 177	959	34
35	481	1.737	- 068	1.740	478	631	-2 983	3 642	327	35
36	.128	.307	- 011	307	127	090	-3.429	2.417	089	36
37	.014	041	- 054	083	- 028	056	-37 845	-2 971	-1 000	37
38	033	105	040	122	018	053	23 996	7 605	2 530	38
39	.139	326	175	.433	.034	.199	30.846	12 548	4 293	39
40	.027	221	- 016	222	025	098	-4.661	8.804	2.901	40
41	.040	368	-.002	.368	.040	.164	- 380	9.253	3.068	41
42	035	311	-.083	324	022	151	-12.357	15.087	5.237	42
43	181	1 181	- 430	1 341	.022	659	-20.348	61 062	22 328	43
44	.280	1 128	110	1 142	276	433	7 345	4 137	1 166	44
45	- 054	403	102	.425	-.075	250	12.038	-5 636	-1 000	45
46	- 018	002	013	009	- 024	017	28 525	-.349	-1.000	46
47	.068	151	105	.222	- 004	113	34.213	-57.502	-1 000	47
48	390	371	330	711	051	330	45 848	14 068	4 856	48
49	070	227	-.162	.328	-.032	180	-32.071	-10.299	-1 000	49
50	.029	.272	- 040	278	.023	.128	-9.019	12 193	4 161	50
51	- 651	1 085	- 594	1.244	-.837	1 041	-17 384	-1 486	-1.000	51
52	- 849	937	237	967	- 880	924	7 423	-1 099	-1 000	52
53	-.361	.333	149	364	- 392	378	11.607	-.929	-1 000	53
54	083	071	078	156	- 001	078	47 175	-135 844	-1 000	54
55	510	169	159	573	107	233	68 483	5.374	1 626	55
56	383	270	205	539	114	212	52 690	4 717	1 382	56
57	076	276	- 087	308	044	132	-20 516	7 010	2 234	57
58	- 615	912	- 270	958	- 661	810	-9 742	-1 449	-1 000	58
59	-1.251	771	016	771	-1.252	1 011	465	- 616	-1 000	59
60	- 822	308	091	315	- 829	572	4 589	- 381	-1 000	60
61	013	022	002	022	013	005	15 369	1 768	285	61
62	156	131	049	.195	093	051	52 159	2 100	409	62
63	632	- 082	300	.664	- 205	429	67.841	-3.198	-1 000	63
64	445	541	- 077	584	402	091	-29 040	1 453	188	64
65	674	711	004	.712	.674	019	6 191	1 056	021	65
66	.584	597	- 020	607	554	027	-25 147	1 096	036	66
67	214	.281	- 016	285	.210	037	-12.777	1.354	132	67
68	081	018	034	080	- 001	041	61 107	-83 778	-1 000	68
69	329	- 073	138	.371	-.115	243	72.749	-3.216	-1 000	69
70	.418	445	- 049	.482	381	050	-37.384	1.264	098	70
71	.658	.695	- 001	695	658	018	- 974	1 056	021	71
72	438	476	002	477	437	020	12 087	1 094	335	72
73	229	238	003	238	229	005	15 871	1 042	015	73
74	010	018	000	018	010	004	2 307	1 846	314	74
75	087	213	407	561	- 262	412	40 599	-2 142	-1 000	75
76	- 146	1 000	- 403	1 128	- 274	701	-17 558	-4 116	-1 000	76
77	084	081	004	081	083	014	8 162	1 529	197	77
78	205	217	004	.218	204	007	15.870	1.072	027	78

```
SSTIPN- 1 LAYER OF GEOTEXTILE, P=2000 PPI, E=5%, EXTENDED, T=1000

TOTAL NUMBER OF NODES------------------ 95
NUMBER OF BAR ELEMENTS----------------- 11
NUMBER OF DIFF  BAR MATERIALS----------  1
NUMBER OF BEAM ELEMENTS----------------  0
NUMBER OF DIFF  BEAM MATERIALS---------  0
NUMBER OF NODAL LINKS -----------------  0
NUMBER OF INTERFACE ELEMENTS-----------  0
NO  OF INTERFACE ELE  IN PREEXIST  PART  0
NUMBER OF INTERFACE ELE. IN FOUNDATION-  0
NUMBER OF INTERFACE MATERIALS----------  0
TOTAL NUMBER OF SOIL ELEMENTS---------- 78
NUMBER OF DIFF  SOIL MATERIALS---------  3
NUMBER OF ELEMENTS IN FOUNDATION------- 36
NUMBER OF NODES IN FOUNDATION---------- 52
NUMBER OF PREEXISTING ELEMENTS---------  0
NUMBER OF PREEXISTING NODES------------  0
NUMBER OF CONSTRUCTION LAYERS----------  6
NUMBER OF LOAD CASES-------------------  2

CALING FACTOR ---------      1 00000

ATMOSPHERIC PRESSURE ---      1 05800

UNIT WEIGHT OF WATER ---       03120


OMPUTATION SEQUENCE FOR A TOTAL OF    8  INCREMENTS
...................................................

 INCREMENT NO   1     APPLY LOAD CASE   1

 INCREMENT NO   2     PUT ON LAYER NO   1

 INCREMENT NO   3     PUT ON LAYER NO   2

 INCREMENT NO   4     PUT ON LAYER NO   3

 INCREMENT NO   5     PUT ON LAYER NO   4

 INCREMENT NO   6     PUT ON LAYER NO   5

 INCREMENT NO   7     PUT ON LAYER NO   6

 INCREMENT NO   8     APPLY LOAD CASE   2
```

NODAL POINT INPUT DATA

NODE NUMBER	NODAL POINT COORDINATES X-ORD	Y-ORD	B.C. CODE X	Y	ZZ
1	.000	.000	1	1	1
2	10.000	.000	1	1	1
3	20.000	.000	1	1	1
4	30.000	.000	1	1	1
5	36.000	.000	1	1	1
6	42.000	.000	1	1	1
7	50.000	.000	1	1	1
8	54.000	.000	1	1	1
9	58.000	.000	1	1	1
10	66.000	.000	1	1	1
11	74.000	.000	1	1	1
12	82.000	.000	1	1	1
13	90.000	.000	1	1	1
14	.000	4.000	1	0	1
15	10.000	4.000	0	0	0
16	20.000	4.000	0	0	0
17	30.000	4.000	0	0	0
18	36.000	4.000	0	0	0
19	42.000	4.000	0	0	0
20	50.000	4.000	0	0	0
21	54.000	4.000	0	0	0
22	58.000	4.000	0	0	0
23	66.000	4.000	0	0	0
24	74.000	4.000	0	0	0
25	82.000	4.000	0	0	0
26	90.000	4.000	1	0	1
27	.000	7.000	1	0	1
28	10.000	7.000	0	0	0
29	20.000	7.000	0	0	0
30	30.000	7.000	0	0	0
31	36.000	7.000	0	0	0
32	42.000	7.000	0	0	0
33	50.000	7.000	0	0	0
34	54.000	7.000	0	0	0
35	58.000	7.000	0	0	0
36	66.000	7.000	0	0	0
37	74.000	7.000	0	0	0
38	82.000	7.000	0	0	0
39	90.000	7.000	1	0	1
40	.000	10.000	1	0	1
41	10.000	10.000	0	0	0
42	20.000	10.000	0	0	0
43	30.000	10.000	0	0	0
44	36.000	10.000	0	0	0
45	42.000	10.000	0	0	0
46	50.000	10.000	0	0	0
47	54.000	10.000	0	0	0
48	58.000	10.000	0	0	0
49	66.000	10.000	0	0	0
50	74.000	10.000	0	0	0
51	82.000	10.000	0	0	0
52	90.000	10.000	1	0	1
53	36.000	11.500	0	0	0
54	42.000	11.500	0	0	0
55	50.000	11.500	0	0	0
56	54.000	11.500	0	0	0
57	58.000	11.500	0	0	0
58	66.000	11.500	0	0	0
59	74.000	11.500	0	0	0
60	82.000	11.500	0	0	0
61	90.000	11.500	1	0	1
62	42.000	13.000	0	0	0
63	50.000	13.000	0	0	0
64	54.000	13.000	0	0	0
65	58.000	13.000	0	0	0
66	66.000	13.000	0	0	0
67	74.000	13.000	0	0	0
68	82.000	13.000	0	0	0
69	90.000	13.000	1	0	1
70	46.000	14.000	0	0	0
71	50.000	14.000	0	0	0
72	54.000	14.000	0	0	0
73	58.000	14.000	0	0	0
74	66.000	14.000	0	0	0
75	74.000	14.000	0	0	0
76	82.000	14.000	0	0	0
77	90.000	14.000	1	0	1
78	50.000	15.000	0	0	0
79	54.000	15.000	0	0	0
80	58.000	15.000	0	0	0
81	66.000	15.000	0	0	0
82	74.000	15.000	0	0	0
83	82.000	15.000	0	0	0
84	90.000	15.000	1	0	1
85	54.000	16.000	0	0	0
86	58.000	16.000	0	0	0
87	66.000	16.000	0	0	0
88	74.000	16.000	0	0	0
89	82.000	16.000	0	0	0
90	90.000	16.000	1	0	1
91	58.000	17.000	0	0	0
92	66.000	17.000	0	0	0
93	74.000	17.000	0	0	0
94	82.000	17.000	0	0	0
95	90.000	17.000	1	0	1

STRUCTURAL ELEMENTS - LINEAR ELASTIC

BAR ELEMENTS-------

MATERIAL NUMBER	E	AREA	WEIGHT/LENGTH
1	240	1 00	0.

ELMT NO	CONNECTED NODES I	J	MATL NO
1	41	42	1
2	42	43	1
3	43	44	1
4	44	45	1
5	45	46	1
6	46	47	1
7	47	48	1
8	48	49	1
9	49	50	1
10	50	51	1
11	51	52	1

SOIL MATERIAL PROPERTY DATA

MATL	UNIT WT	YOUNG'S MODULUS CONSTANT	YOUNG'S MODULUS EXPONENT	RATIO	BULK MODULUS CONSTANT	BULK MODULUS EXPONENT	STRENGTH PARAMETERS C	PHI	DPHI	KO
1	.0880	8000 00	500	500	1500 00	800	00	35.00	.00	50
2	0530	40 00	300	.800	20.00	200	05	00	00	50
3	0800	1000 00	400	750	500 00	500	50	40 00	00	.50

FOUR NODES SOLID ELEMENT DATA

ELET NO.	CONNECTED NODES I	J	K	L	MATL NO.	ELEMENT CENTER COORDINATES X-ORD	Y-ORD
1	1	2	15	14	3	5 000	2 000
2	2	3	16	15	3	15 000	2.000
3	3	4	17	16	3	25 000	2.000
4	4	5	18	17	2	33.000	2 000
5	5	6	19	18	2	39 000	2 000
6	6	7	20	19	2	46.000	2.000
7	7	8	21	20	2	52 000	2.000
8	8	9	22	21	2	58 000	2 000
9	9	10	23	22	3	62 000	2 000
10	10	11	24	23	3	70.000	2.000
11	11	12	25	24	3	78.000	2.000
12	12	13	26	25	3	86.000	2.000
13	14	15	28	27	3	5 000	5 500
14	15	16	29	28	3	15.000	5 500
15	16	17	30	29	2	25 000	5.500
16	17	18	31	30	2	33.000	5 500
17	18	19	32	31	2	39.000	5.500
18	19	20	33	32	2	46.000	5.500
19	20	21	34	33	2	52.000	5 500
20	21	22	35	34	2	58.000	5.500
21	22	23	36	35	2	62 000	5.500
22	23	24	37	36	3	70 000	5 500
23	24	25	38	37	3	78 000	5 500
24	25	26	39	38	3	86.000	5.500
25	27	28	41	40	3	5.000	8.500
26	28	29	42	41	2	15 000	8 500
27	29	30	43	42	2	25 000	8 500
28	30	31	44	43	2	33 000	8 500
29	31	32	45	44	2	39 000	8 500
30	32	33	46	45	2	46 000	8.500
31	33	34	47	46	2	52 000	8 500
32	34	35	48	47	2	58 000	8.500
33	35	36	49	48	2	62.000	8 500
34	36	37	50	49	2	70 000	8.500
35	37	38	51	50	3	78 000	8 500
36	38	39	52	51	3	86 000	8.500
37	43	44	53	53	1	34.500	10.750
38	44	45	54	53	1	39.000	10 750
39	45	46	55	54	1	46 000	10 750
40	46	47	56	55	1	52.000	10 750
41	47	48	57	56	1	58 000	10.750
42	48	49	58	57	1	62 000	10 750
43	49	50	59	58	1	70 000	10 750
44	50	51	60	59	1	78 000	10 750
45	51	52	61	60	1	86 000	10 750
46	53	54	62	62	1	40 500	12 250
47	54	55	63	62	1	46 000	12 250
48	55	56	64	63	1	52 000	12.250
49	56	57	65	64	1	58 000	12.250
50	57	58	66	65	1	62 000	12 250
51	58	59	67	66	1	70 000	12 250
52	59	60	68	67	1	78 000	12 250
53	60	61	69	68	1	86 000	12 250
54	62	63	71	70	1	47 000	13 500
55	63	64	72	71	1	52 000	13 500
56	64	65	73	72	1	58 000	13 500
57	65	66	74	73	1	62 000	13 500
58	66	67	75	74	1	70 000	13 500
59	67	68	76	75	1	78.000	13 500
60	68	69	77	76	1	86 000	13 500
61	70	71	78	78	1	49 000	14 500
62	71	72	79	78	1	52.000	14 500
63	72	73	80	79	1	58 000	14 500
64	73	74	81	80	1	62 000	14 500
65	74	75	82	81	1	70 000	14 500
66	75	76	83	82	1	78 000	14 500
67	76	77	84	83	1	86 000	14 500
68	78	79	85	85	1	53 000	15 500
69	79	80	86	85	1	58 000	15 500
70	80	81	87	86	1	62 000	15 500
71	81	82	88	87	1	70 000	15 500
72	82	83	89	88	1	78 000	15 500
73	83	84	90	89	1	86 000	15 500
74	85	86	91	91	1	57 000	16 500
75	86	87	92	91	1	62 000	16 500
76	87	88	93	92	1	70 000	16 500
77	88	89	94	93	1	78 000	16 500
78	89	90	95	94	1	86 000	16 500

SSTIPN- 1 LAYER OF GEOTEXTILE, P=2000 PPI, E=5%, EXTENDED, T=1000

```
*****************************************************
*****************************************************
*                                                   *
*  LOAD CASE -------------------------------  2     *
*                                                   *
*****************************************************
*****************************************************
```

LARGEST ELE NO. IN THIS INCREMENT   78

LARGEST N P NO IN THIS INCREMENT   95

BAND WIDTH------------------------ 40

TOTAL NUMBER OF EQUATIONS--------- 222

NUMBER OF EQUATIONS IN BLOCK------ 84

NUMBER OF BLOCKS------------------ 3

NUMBER OF N.P. FORCE CARDS-------- 3

NUMBER OF PRESSURE CARDS---------- 0

NODAL POINT FORCES (WEIGHTS OF ADDED ELEMENTS)

NP	X-FORCE	Y-FORCE
1	0	0.
2	0	0
3	0	0
4	0.	0
5	0.	0
6	0.	0
7	0.	0.
8	0.	0
9	0	0
10	0	0
11	0.	0.
12	0	0
13	0	0
14	0	0
15	0.	0.
16	0	0.
17	0	0.
18	0	0
19	0	0
20	0	0.
21	0.	0.
22	0	0.
23	0	0
24	0	0.
25	0	0.
26	0	0
27	0	0
28	0	0
29	0	0
30	0	0
31	0	0
32	0	0
33	0	0
34	0	0
35	0	0
36	0	0
37	0	0
38	0	0
39	0	0
40	0	0
41	0	0
42	0	0
43	0	0
44	0	0
45	0	0
46	0	0
47	0	0
48	0	0
49	0	0
50	0	0
51	0	0
52	0	0
53	0	0
54	0	0
55	0	0
56	0	0
57	0	0
58	0	0
59	0	0
60	0	0
61	0	0
62	0	0

63	0	0.
64	0	0
65	0.	0
66	0.	0
67	0.	0
68	0	0
69	0	0
70	0	0
71	0.	0.
72	0	0
73	0	0.
74	0	0
75	0	0
76	0	0
77	0	0.
78	0	0.
79	0.	0
80	0	0
81	0	0
82	0	0
83	0	0
84	0	0
85	0.	0
86	0	0
87	0.	0
88	0	0
89	0	0
90	0	0
91	0	0.
92	0	-4.50
93	0	-4.50
94	0.	-2.00
95	0	0

LOAD CASE = 2 ITERATION = 2

NP	DELTA-X	DELTA-Y	DELTA-ZZ	X-DISP	Y-DISP	ZZ-ROTAT	TOTAL	NP
1	.0000	.0000	.0000	.0000	.0000	.0000	.0000	1
2	.0000	.0000	.0000	.0000	.0000	.0000	.0000	2
3	.0000	.0000	.0000	.0000	.0000	.0000	.0000	3
4	.0000	.0000	.0000	.0000	.0000	.0000	.0000	4
5	.0000	.0000	.0000	.0000	.0000	.0000	.0000	5
6	.0000	.0000	.0000	.0000	.0000	.0000	.0000	6
7	.0000	.0000	.0000	.0000	.0000	.0000	.0000	7
8	.0000	.0000	.0000	.0000	.0000	.0000	.0000	8
9	.0000	.0000	.0000	.0000	.0000	.0000	.0000	9
10	.0000	.0000	.0000	.0000	.0000	.0000	.0000	10
11	.0000	.0000	.0000	.0000	.0000	.0000	.0000	11
12	.0000	.0000	.0000	.0000	.0000	.0000	.0000	12
13	.0000	.0000	.0000	.0000	.0000	.0000	.0000	13
14	.0000	-.0003	.0000	.0000	-.0013	.0000	.0013	14
15	-.0002	.0001	.0000	-.0008	.0007	.0000	.0010	15
16	-.0001	.0000	.0000	-.0003	-.0005	.0000	.0006	16
17	-.0004	.0001	.0000	-.0048	.0022	.0000	.0051	17
18	-.0152	.0069	.0000	-.1782	.0198	.0000	.1793	18
19	-.0312	.0020	.0000	-.2467	-.0739	.0000	.2575	19
20	-.0350	-.0055	.0000	-.1461	-.1162	.0000	.1867	20
21	-.0245	-.0165	.0000	-.0592	-.1350	.0000	.1474	21
22	-.0008	-.0009	.0000	-.0001	-.0052	.0000	.0052	22
23	-.0008	-.0018	.0000	.0001	-.0049	.0000	.0049	23
24	.0009	-.0054	.0000	.0017	-.0104	.0000	.0105	24
25	.0021	-.0022	.0000	.0024	-.0057	.0000	.0062	25
26	.0000	.0002	.0000	.0000	-.0030	.0000	.0030	26
27	.0000	-.0005	.0000	.0000	-.0024	.0000	.0024	27
28	-.0005	.0003	.0000	-.0026	.0014	.0000	.0030	28
29	.0000	.0000	.0000	.0003	-.0006	.0000	.0007	29
30	-.0130	.0036	.0000	-.1263	.0513	.0000	.1363	30
31	-.0258	.0142	.0000	-.2137	.0402	.0000	.2174	31
32	-.0491	.0105	.0000	-.2741	-.1254	.0000	.3014	32
33	-.0830	-.0049	.0000	-.2493	-.2236	.0000	.3349	33
34	-.0989	-.0174	.0000	-.2252	-.2199	.0000	.3147	34
35	-.0929	-.0428	.0000	-.1855	-.1711	.0000	.2380	35
36	-.0006	-.0048	.0000	.0020	-.0131	.0000	.0133	36
37	.0022	-.0104	.0000	.0031	-.0190	.0000	.0192	37
38	.0026	-.0041	.0000	.0026	-.0109	.0000	.0112	38
39	.0000	.0012	.0000	.0000	-.0049	.0000	.0049	39
40	.0000	-.0006	.0000	.0000	-.0032	.0000	.0032	40
41	-.0025	.0006	.0000	-.0113	.0028	.0000	.0115	41
42	-.0160	.0027	.0000	-.0600	.0142	.0000	.0617	42
43	-.0300	.0090	.0000	-.1081	.0923	.0000	.1422	43
44	-.0339	.0185	.0000	-.1169	.0294	.0000	.1206	44
45	-.0369	.0172	.0000	-.1259	-.1661	.0000	.2084	45
46	-.0422	-.0028	.0000	-.1180	-.3001	.0000	.3225	46
47	-.0375	-.0209	.0000	-.0993	-.2980	.0000	.3141	47
48	-.0225	-.0612	.0000	-.0686	-.2723	.0000	.2808	48
49	-.0023	-.0848	.0000	-.0186	-.2097	.0000	.2105	49
50	.0020	-.0250	.0000	-.0005	-.0441	.0000	.0441	50
51	.0002	-.0039	.0000	-.0013	-.0126	.0000	.0127	51
52	.0000	.0018	.0000	.0000	-.0084	.0000	.0084	52
53	-.0360	.0190	.0000	-.1013	.0723	.0000	.1244	53
54	-.0361	.0176	.0000	-.0931	-.0938	.0000	.1322	54
55	-.0392	-.0028	.0000	-.0907	-.2259	.0000	.2434	55
56	-.0397	-.0225	.0000	-.0865	-.2706	.0000	.2847	56
57	-.0114	-.0627	.0000	-.1018	-.2991	.0000	.3160	57
58	-.0099	-.0864	.0000	-.0388	-.2397	.0000	.2428	58
59	-.0048	-.0284	.0000	.0449	-.0911	.0000	.1015	59
60	-.0021	-.0042	.0000	-.0032	-.0121	.0000	.0125	60

61	0000	0019	0000	0000	- 0065	0000	0065	61
62	- 0327	0176	0000	- 0541	- 0156	0000	0563	62
63	- 0352	-.0013	.0000	-.0604	- 1223	.0000	1364	63
64	- 0413	- 0232	0000	- 0365	- 1626	0000	.1764	64
65	-.0582	- 0852	0000	-.0851	-.2217	0000	2375	65
66	- 0231	- 0893	0000	- 0525	- 1721	0000	1799	66
67	-.0104	- 0271	0000	-.0251	- 1197	0000	1223	67
68	-.0050	- 0045	0000	- 0087	- 0111	0000	0129	68
69	0000	0020	.0000	0000	- 0043	.0000	0043	69
70	- 0317	0083	0000	- 0435	- 0355	0000	0561	70
71	- 0315	- 0006	0000	- 0473	- 0765	0000	0899	71
72	-.0321	- 0230	.3000	-.0511	- 1131	.0000	1241	72
73	-.0406	- 0829	0000	-.0628	- 1739	.0000	1849	73
74	- 0518	- 2855	0000	- 0765	- 3467	0000	3550	74
75	-.0132	- 0281	0000	- 0272	- 1309	.0000	1337	75
76	- 0072	- 0048	.0000	-.0089	- 0104	.0000	0137	76
77	.0000	.0019	.0000	0000	- 0030	0000	0030	77
78	- 0270	- 0009	0000	- 0356	- 0366	0000	0511	78
79	-.0214	- 0231	0000	- 0315	- 0667	.0000	.0737	79
80	- 0204	- 0819	0000	- 0326	- 1277	0000	.1318	80
81	- 0241	- 2873	0000	- 0378	-.3229	.0000	3251	81
82	0947	- 2553	0000	0838	- 3407	0000	3508	82
83	.6645	- 0597	0000	6626	- 0642	0000	6657	83
84	0000	0914	0000	0000	0880	.0000	0880	84
85	- 0108	- 0244	0000	- 0147	- 0408	0000	0432	85
86	0017	- 0814	0000	- 0036	- 0996	0000	0997	86
87	.0031	- 2893	0000	- 0028	- 3058	.0000	3058	87
88	0042	- 5033	0000	0011	- 5336	0000	.5336	88
89	5380	- 1223	0000	5036	- 1456	0000	5242	89
90	0000	2353	0000	0000	2158	0000	2158	90
91	.0275	- 0612	0000	0276	- 0612	0000	0657	91
92	.0294	- 2899	.0000	0294	- 2899	.0000	2914	92
93	0312	- 5046	0000	0312	-.5046	0000	5055	93
94	2716	- 2477	0000	2716	- 2477	0000	3676	94
95	0000	3726	0000	0000	3726	.0000	.3726	95

STRUCTURAL ELEMENTS - LINEAR ELASTIC

BAR ELEMENTS--INTERNAL MEMBER FORCES

ELEMENT NO	AXIAL FORCE
INCREMENTAL VALUES	
1	- 3257
2	-.3359
3	- 1540
4	-.2027
5	- 0977
6	2842
7	.8985
8	.8048
9	1308
10	-.0565
11	- 0062
TOTAL VALUES	
1	-1 1895
2	-1.1534
3	- 3534
4	-.3613
5	.2383
6	1.1202
7	1.8463
8	1.4988
9	5428
10	- 0224
11	0376

FOUR NODE SOLID ELEMENTS - MODULI AND STRAINS (STRAINS IN PERCENT)

ELE	ELAS MOD	BULK MOD	SHEAR MOD	POIS	EPS-X	EPS-Y	GAM-XY	EPS-1	EPS-3	GAMMAX	ELE
1	540 6	342 8	233 0	180	004	008	000	008	004	004	1
2	500.3	314 9	216 3	15[illegible]	- 002	- 002	020	.008	- 012	020	2
3	534.7	334.4	231 8	17[illegible]	021	- 021	048	032	-.032	.084	3
4	6	17.2	2	49[illegible]	1 446	- 276	2 138	1 958	- 787	2.745	4
5	7	17 3	2	494	571	675	6 092	3 669	-2 423	6 092	5
6	7	18.0	2	494	- 625	2.376	5.174	3.465	-2 116	5.583	6
7	7	18.4	2	493	-1 085	3.139	2 904	3.562	-1 508	5.070	7
8	6	17 0	2	.494	- 741	1.752	- 880	1.827	-.816	2 642	8
9	475 0	343 8	195 3	216	- 001	126	- 002	126	- 001	127	9
10	472.8	362.7	191 2	.236	- 010	191	012	192	- 010	.202	10
11	476 4	373.6	191 5	244	- 005	.201	- 081	.208	- 012	.221	11
12	513.4	366.1	212 1	210	015	.108	- 047	114	010	104	12
13	530 1	315 0	235 3	127	017	006	003	017	006	011	13
14	374.2	222 6	166 0	127	- 017	- 010	036	006	- 032	.037	14
15	1 7	13 5	6	479	854	- 817	1.744	1.060	-1 222	2.282	15
16	7 9	16.9	2 6	417	2 174	-1 157	2 564	2 611	-1.593	4 204	16
17	1 3	16 9	4	487	1 074	520	3 210	2 424	- 831	3 257	17
18	.6	17.2	.2	494	- 754	2.450	3 054	3.231	-1 364	4.596	18
19	6	17.1	2	494	-1 366	3 207	4 671	4 186	-2 365	6.551	19
20	7	18.2	2	494	-1 487	4 181	3.289	4 624	-1 929	6 553	20
21	6	17 1	2	494	-1 048	2 903	1 737	3.085	-1 230	4 315	21
22	442 9	351 8	177 5	246	- 017	260	016	.261	- 017	284	22
23	408.2	310 3	165.5	233	- 002	230	- 107	242	- 014	256	23
24	480 8	313.0	193.5	191	032	118	-.057	127	023	104	24
25	337 6	215 6	145 1	184	070	- 011	085	092	- 033	125	25
26	.4	13.4		.495	229	-.271	1 102	.584	-.626	1.210	26
27	.0	1	[illegible]	495	.873	-.932	.052	.874	- 932	1 806	27
28	1 6	13.5	5	.481	802	-.505	-1.299	1 070	- 773	1 842	28
29	1.6	14.7	5	481	579	857	-1 073	1 2'2	164	1 108	29
30	5	15.2	2	494	- 205	1 952	-3.206	2.806	-1 050	3.864	30
31	6	15 8	2	494	- 534	2 576	-4 359	3 698	-1 637	5 335	31
32	6	15.5	2	494	-1.131	2 987	-4.644	4 032	-2 175	6 207	32
33	7	17 7	2	494	-1 359	4 942	-2 852	5 229	-1 626	6 854	33
34	.6	17.1	3	492	- 120	3.694	- 596	3.717	- 143	3.860	34
35	299.4	265 0	117 0	279	008	447	- 123	456	- 001	456	35
36	342.5	216.5	147 8	159	.009	.088	001	.088	.009	080	36
37	349 8	441 7	129 2	354	154	- 063	- 089	164	- 073	238	37
38	176 5	419 1	61 5	427	009	- 014	1 803	913	- 890	1 803	38
39	272.3	431 4	98 4	386	-.058	.108	289	182	- 133	316	39
40	140.2	414 8	48 7	441	- 252	1 270	- 012	1 270	- 252	1 522	40
41	1	4 0	0	495	- 206	3 498	1 586	3 666	- 355	4 021	41
42	302 1	435.3	110 0	.374	- 665	3 662	1 542	3.989	- 813	4 802	42
43	837.4	555 7	249 9	.275	- 617	3 241	-2 556	3.626	1 002	4 628	43
44	1056 6	775 2	432 7	221	309	1 723	-2.094	2 280	- 247	2 527	44
45	1129 4	718 5	486 6	180	- 026	068	011	068	- 026	095	45
46	1	4.0	0	495	-.045	002	.056	015	- 058	072	46
47	173.1	418.9	60 6	428	050	- 032	433	230	- 212	441	47
48	194.1	421 4	68 4	419	078	017	556	325	- 233	.558	48
49	1	4 0	0	495	- 225	822	2 839	1 810	-1 217	3 027	49
50	1	4 0	0	495	- 255	929	2 024	1.514	- 839	2.353	50
51	724 3	609.7	288 2	265	- 252	2 794	120	2 795	- 253	3.048	51
52	1766.9	969 7	820.2	077	- 182	2 689	- 382	2 702	- 195	2.897	52
53	1040 9	633.1	458 9	139	- 061	066	040	069	- 064	134	53
54	205 9	422 9	72.6	414	076	- 045	071	080	- 055	.136	54
55	672.3	562.4	266 3	.263	.123	- 024	- 086	131	- 021	161	55
56	503.3	463 7	195.2	290	370	- 114	.316	380	- 164	545	56
57	1	4 0	0	495	- 124	9 730	1 901	9 821	- 215	10 036	57
58	1	4 0	0	495	- 443	12 534	216	12 505	- 450	12 955	58
59	1189.6	731.4	519.9	.145	- 201	2.706	-.722	2 750	- 245	2 995	59
60	758 2	505.5	320.5	183	-.037	.072	033	073	- 038	171	60
61	79.0	407.8	26.9	.487	054	005	.049	.083	- 004	.087	61
62	306.8	435.9	111 3	372	- 033	012	- 154	070	- 090	160	62
63	428 1	482 6	162 0	.321	125	-.042	- 028	.126	- 044	170	63
64	447.9	455.5	170.6	.313	107	062	138	.153	008	147	64
65	1	4 0	0	.435	-1 032	14 009	-8.033	15.014	-2 037	17 051	65
66	1	4.0	0	495	-3.816	16 566	-61.880	29.742	-16.870	46.612	66
67	1	4 0	0	495	4 211	-1 675	-33 571	19 295	-16 759	36 054	67
68	156.8	416.1	58 3	.430	- 127	121	- 475	264	- 271	535	68
69	343.2	440 8	128.5	.357	- 144	.037	- 164	069	- 176	245	69
70	465.7	458.1	178 4	.306	022	035	114	118	- 012	130	70
71	1	4.0	0	495	- 768	12 534	4 382	12 883	-1 116	13 999	71
72	1	4 0	0	495	-6 636	16 604	[illegible] 575	17.647	-7 795	25 341	72
73	.1	4 0	0	495	7 419	-2 115	5 789	8.229	-2 925	11.154	73
74	.1	4.0	0	.495	-.313	- 023	-1 169	434	- 770	1 205	74
75	981 1	596 2	430 8	139	- 020	016	- 013	018	- 02[illegible]	038	75
76	1075 1	659.6	472.5	142	- 016	092	012	092	-.019	111	76
77	1	4 0	0	495	-4 838	6.338	7 986	7.618	-6 118	13.737	77
78	1	4.0	0	495	5 060	- 588	7 208	6.814	-2 343	9 157	78

FOUR NODE SOLID ELEMENTS - STRESSES

ELE	SIG-X	SIG-Y	TAU-XY	SIG-1	SIG-3	TAU-MAX	THETA	SIG1/SIG3	LEVEL	ELE
1	270	523	-.001	523	270	126	- 131	1 937	.083	1
2	226	468	044	476	218	126	10 010	2 175	.088	2
3	343	381	116	479	245	117	40 370	1 951	.077	3
4	.373	548	004	548	373	087	1 427	1 484	1 731	4
5	362	582	013	583	361	091	3.975	1 477	1 812	5
6	434	656	011	657	483	087	3 329	1 418	1 537	6
7	517	715	008	716	517	099	1 843	1 384	1 286	7
8	336	526	- 002	526	336	095	- 504	1 566	1 902	8
9	325	1 013	- 007	1 013	325	344	- 611	3 114	207	9
10	395	1 371	021	1 372	395	488	1 259	3 472	274	10
11	446	1 442	- 156	1 467	423	522	-8.801	3 464	284	11
12	.394	958	- 093	973	377	.298	-9.756	2 579	170	12
13	226	315	006	315	225	045	3 545	1 397	.030	13
14	061	218	064	241	038	101	19 519	6 273	083	14
15	074	152	007	153	073	040	5.053	2 088	756	15
16	278	283	026	313	258	027	38 761	1 212	.546	16
17	335	419	005	419	334	043	6 158	1 257	857	17
18	371	473	006	474	370	052	3 608	1 279	1 034	18
19	381	468	010	469	380	055	5 183	1 304	1 094	19
20	513	627	008	628	513	058	3 979	1 225	1 154	20
21	388	475	004	475	388	053	1 918	1 281	1 070	21
22	361	1 545	027	1 545	360	583	1 314	4 289	344	22
23	334	1 219	- 180	1 256	299	478	-11 053	4 137	287	23
24	336	712	- 111	742	306	218	-15 262	2 428	134	24
25	.311	086	159	393	006	194	62 522	36 663	179	25
26	002	002	000	002	001	000	55 957	1 671	009	26
27	.023	000	- 010	.032	- 003	017	-72 549	-9 663	-1 000	27
28	065	032	- 035	086	009	039	-57 661	9 301	781	28
29	165	245	- 003	245	165	.040	-2 120	1 478	792	29
30	202	294	- 009	295	201	049	-5 422	1 468	981	30
31	248	345	- 012	347	247	050	-7 107	1 405	1 000	31
32	219	316	- 020	320	215	052	-11 154	1 483	1 041	32
33	516	624	- 006	625	515	055	-4 923	1 213	1 099	33
34	514	609	- 004	608	514	048	-2 385	1 186	955	34
35	523	1 692	- 161	1 711	510	601	-7 27[illegible]	3 356	302	35
36	061	351	000	351	061	135	009	4 351	111	36
37	615	087	- 149	644	058	393	-78 672	14 637	5 068	37
38	175	091	084	227	039	094	58 166	5 802	1 785	38
39	198	302	162	419	078	171	35 961	5 400	1 636	39
40	- 047	277	213	382	- 153	266	26 341	-2 502	-1 000	40
41	- 007	275	- 014	276	- 008	142	-2 908	-34 540	-1 000	41
42	- 426	403	159	432	- 456	444	10 501	- 948	-1 000	42

43	- 182	1 181	- 886	1 619	- 620	1 120	-26.256	-2 613	-1 000	43
44	206	1 014	.305	1 116	105	505	18.552	10 605	3.570	44
45	-.044	463	.036	.465	- 046	256	4.250	-10.033	-1 000	45
46	010	026	.016	.037	000	018	31 723	780.280	289.677	46
47	181	082	.152	278	- 036	157	52 308	-7 832	-1.000	47
48	448	485	486	932	000	466	43 861	-56260 340	-1 000	48
49	-.027	101	- 127	180	-.106	143	-31 594	-1 701	-1 000	49
50	103	.405	- 064	427	081	173	-14 582	5 284	1.592	50
51	- 576	997	-.519	1 153	-.732	943	-16 715	-1.575	-1.000	51
52	- 880	686	096	691	- 886	666	3 090	-1 006	-1 000	52
53	- 402	378	126	399	- 422	.410	9.093	- 945	-1 000	53
54	245	030	095	.281	-.006	143	89.282	-49 440	-1 000	54
55	1.019	130	- 165	1 049	100	474	-79.851	10 484	3.518	55
56	2 0[illegible]	095	658	2 255	- 106	1 180	73 066	-21 337	-1 000	56
57	603	670	- 132	772	501	136	-37 782	1 543	.202	57
58	454	582	- 081	590	427	081	-24 359	1 381	142	58
59	- 849	892	- 191	913	- 870	891	-6.196	-1.050	-1.000	59
60	- 534	280	032	291	- 544	417	6 376	- 534	-1 000	60
61	016	033	- 056	.081	-.032	057	-40 705	-2.552	-1.000	61
62	- 058	-.031	- 108	084	-.153	109	-41 272	- 420	-1.000	62
63	800	020	012	800	090	.355	89 057	8.916	2 942	63
64	887	709	159	980	615	183	59 589	1 594	221	64
65	528	557	- 003	558	.528	015	-6.228	[illegible]	021	65
66	522	555	- 017	562	.515	024	-22.511	1 082	034	66
67	196	302	-.014	304	.194	.055	-7 568	1 587	211	67
68	- 137	116	- 248	268	- 289	279	-31 475	- 927	-1 000	68
69	-.821	243	- 171	- 177	- 687	255	-21.075	.257	-1.000	69
70	.448	685	187	758	358	199	28 480	2 112	413	70
71	.528	575	013	.578	525	027	14 816	1 102	038	71
72	398	432	004	433	398	018	6 034	1 092	034	72
73	.232	242	002	.242	232	005	13 077	1 045	017	73
74	- 006	004	002	004	-.005	005	10.037	- 758	-1 000	74
75	- 159	170	- 064	179	- 168	.173	-9.148	-1 064	-1 000	75
76	- 016	1 036	059	1 039	- 022	531	3 188	-47 722	-1 000	76
77	072	098	003	069	072	013	8.903	1.371	138	77
78	187	210	003	211	187	007	12 347	1 070	028	78

PROGRAM SSTIPN

```
SSTIPN: 1 LAYER OF GEOTEXTILE, P=[illegible] PPI, E=5%, T=0

TOTAL NUMBER OF NODES--------------------- 95
NUMBER OF BAR ELEMENTS-------------------  9
NUMBER OF DIFF  BAR MATERIALS-----------  1
NUMBER OF BEAM ELEMENTS-----------------  0
NUMBER OF DIFF  BEAM MATERIALS----------  0
NUMBER OF NODAL LINKS ------------------  0
NUMBER OF INTERFACE ELEMENTS------------  0
NO  OF INTERFACE ELE  IN PREEXIST  PART  0
NUMBER OF INTERFACE ELE. IN FOUNDATION-  0
NUMBER OF INTERFACE MATERIALS-----------  0
TOTAL NUMBER OF SOIL ELEMENTS---------- 78
NUMBER OF DIFF  SOIL MATERIALS---------  3
NUMBER OF ELEMENTS IN FOUNDATION------- 36
NUMBER OF NODES IN FOUNDATION---------- 52
NUMBER OF PREEXISTING ELEMENTS --------  0
NUMBER OF PREEXISTING NODES------------  0
NUMBER OF CONSTRUCTION LAYERS----------  6
NUMBER OF LOAD CASES----- -------------  1

CALING FACTOR ----------       1 00000

ATMOSPHERIC PRESSUPE ---       1 05800

UNIT WEIGHT OF WATER ---         03120


OMPUTATION SEQUENCE FOR A TOTAL OF     7  INCREMENTS
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 INCREMENT NO   1      PUT ON LAYER NO   1

 INCREMENT NO   2      PUT ON LAYER NO   2

 INCREMENT NO   3      PUT ON LAYER PO.  3

 INCREMENT NO   4      PUT ON LAYER NO   4

 INCREMENT NO   5      PUT ON LAYER NO   5

 INCREMENT NO   6      PUT ON LAYER NO   6

 INCREMENT NO   7      APPLY LOAD CASE   1
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NODAL POINT INPUT DATA

NODE NUMBER	NODAL POINT COORDINATES X-ORD	Y-ORD	B C. CODE X	Y	ZZ
1	000	000	1	1	1
2	10 000	.000	1	1	1
3	20 000	.000	1	1	1
4	30.000	000	1	1	1
5	36 000	000	1	1	1
6	42 000	.000	1	1	1
7	50.000	000	1	1	1
8	54.000	000	1	1	1
9	58 000	000	1	1	1
10	66.000	.000	1	1	1
11	74 000	.000	1	1	1
12	82.000	.000	1	1	1
13	90 000	000	1	1	1
14	.000	4 000	1	0	1
15	10.000	4.000	0	0	0
16	20 000	4 000	0	0	0
17	30 000	4 000	0	0	0
18	36.000	4.000	0	0	0
19	42.000	4.000	0	0	0
20	50.000	4 000	0	0	0
21	54 000	4 000	0	0	0
22	58.000	4.000	0	0	0
23	66.000	4.000	0	0	0
24	74 000	4.000	0	0	0
25	82 000	4 000	0	0	0
26	90 000	4.000	1	0	1
27	.000	7 000	1	0	1
28	10.000	7.000	0	0	0
29	20 000	7 000	0	0	0
30	30 000	7.000	0	0	0
31	36.000	7.000	0	0	0
32	42.000	7 000	0	0	0
33	50 000	7 000	0	0	0
34	54 000	7.000	0	0	0
35	58 000	7.000	0	0	0
36	66.000	7 000	0	0	0
37	74 000	7 000	0	0	0
38	82.000	7 000	0	0	0
39	90.000	7 000	1	0	1
40	000	10.000	1	0	1
41	10 000	10 000	0	0	0
42	20 000	10.000	0	0	0
43	30 000	10 000	0	0	0
44	36 000	10.000	0	0	0
45	42.000	10 000	0	0	0
46	50.000	10.000	0	0	0
47	54.000	10 000	0	0	0
48	58 000	10 000	0	0	0
49	66 000	10 000	0	0	0
50	74 000	10.000	0	0	0
51	82.000	10 000	0	0	0
52	90 000	10.000	1	0	1
53	36 000	11 500	0	0	0
54	42.000	11 500	0	0	0
55	50.000	11.500	0	0	0
56	54 000	11.500	0	0	0
57	58 000	11 500	0	0	0
58	66.000	11.500	0	0	0
59	74 000	11 500	0	0	0
60	82.000	11 500	0	0	0
61	90 000	11.500	1	0	1
62	42.000	13.000	0	0	0
63	50.000	13 000	0	0	0
64	54.000	13.000	0	0	0
65	58.000	13.000	0	0	0
66	66.000	13.000	0	0	0
67	74 000	13 000	0	0	0
68	82 000	13 000	0	0	0
69	90.000	13 000	1	0	1
70	46 000	14 000	0	0	0
71	50 000	14 000	0	0	0
72	54.000	14.000	0	0	0
73	58 000	14.000	0	0	0
74	63 000	14.000	0	0	0
75	74 000	14 000	0	0	0
76	82 000	14.000	0	0	0
77	90 000	14.000	1	0	1
78	50 000	15.000	0	0	0
79	54 000	15 000	0	0	0
80	58 000	15 000	0	0	0
81	66 000	15 000	0	0	0
82	74 000	15.000	0	0	0
83	82 000	15 000	0	0	0
84	90.000	15.000	1	0	1
85	54 000	16 000	0	0	0
86	58 000	16.000	0	0	0
87	66.000	16 000	0	0	0
88	74 000	16.000	0	0	0
89	82.000	16 000	0	0	0
90	90 000	16 000	1	0	1
91	58 000	17 000	0	0	0
92	66 000	17 000	0	0	0
93	74 000	17 000	0	0	0
94	82 000	17 000	0	0	0
95	90 000	17 000	1	0	1

BAR ELEMENTS-------

MATERIAL NUMBER	E	AREA	WEIGHT/LENGTH
1	480.	1.00	0

ELMT NO	CONNECTED NODES I	CONNECTED NODES J	MATL NO
1	43	44	1
2	44	45	1
3	45	46	1
4	46	47	1
5	47	48	1
6	48	49	1
7	49	50	1
8	50	51	1
9	51	52	1

SOIL MATERIAL PROPERTY DATA

MATL	UNIT WT	YOUNG'S MODULUS CONSTANT	YOUNG'S MODULUS EXPONENT	RATIO	BULK MODULUS CONSTANT	BULK MODULUS EXPONENT	STRENGTH PARAMETERS C	STRENGTH PARAMETERS PHI	STRENGTH PARAMETERS DPHI	KO
1	0880	8000 00	500	500	1500 00	800	00	35 00	00	50
2	0530	40 00	300	900	20 00	200	05	00	00	50
3	.0800	1000.00	400	700	500.00	500	50	40 00	00	50

FOUR NODES SOLID ELEMENT DATA

ELET NO	CONNECTED NODES I	J	K	L	MATL NO	ELEMENT CENTER COORDINATES X-ORD	Y-ORD
1	1	2	15	14	3	5.000	2.000
2	2	3	16	15	3	15 000	2.000
3	3	4	17	16	3	25 000	2 000
4	4	5	18	17	2	33.000	2 000
5	5	6	19	18	2	39 000	2.000
6	6	7	20	19	2	46.000	2.000
7	7	8	21	20	2	52 000	2 000
8	8	9	22	21	2	58 000	2.000
9	9	10	23	22	3	62.000	2.000
10	10	11	24	23	3	70.000	2.000
11	11	12	25	24	3	78 000	2 000
12	12	13	26	25	3	86.000	2.000
13	14	15	28	27	3	5.000	5.500
14	15	16	29	28	3	15 000	5.500
15	16	17	30	29	2	25 000	5 500
16	17	18	31	30	2	33.000	5.500
17	18	19	32	31	2	39.000	5.500
18	19	20	33	32	2	46.000	5 500
19	20	21	34	33	2	52.000	5.300
20	21	22	35	34	2	58 000	5.500
21	22	23	36	35	2	62.000	5.500
22	23	24	37	36	3	70.000	5 500
23	24	25	38	37	3	78 000	5.500
24	25	26	39	38	3	86.000	5 500
25	27	28	41	40	3	5 000	8 500
26	28	29	42	41	2	15 000	8.500
27	29	30	43	42	2	25 000	8.500
28	30	31	44	43	2	33 000	8 500
29	31	32	45	44	2	39 000	8 500
30	32	33	46	45	2	46.000	8.500
31	33	34	47	46	2	52.000	8 500
32	34	35	48	47	2	58.000	8.500
33	35	36	49	48	2	62 000	8 500
34	36	37	50	49	2	70 000	8 500
35	37	38	51	50	3	78.000	8.500
36	38	39	52	51	3	86.000	8 500
37	43	44	53	53	1	34 500	10 750
38	44	45	54	53	1	39 000	10 750
39	45	46	55	54	1	46.000	10.750
40	46	47	56	55	1	52 000	10 750
41	47	48	57	56	1	58 000	10 750
42	48	49	58	57	1	62.000	10 750
43	49	50	59	58	1	70.000	10.750
44	50	51	60	59	1	78.000	10 750
45	51	52	61	60	1	86 000	10 750
46	53	54	62	62	1	40.500	12 250
47	54	55	63	62	1	46 000	12.250
48	55	56	64	63	1	52 000	12 250
49	56	57	65	64	1	58 000	12 250
50	57	58	66	65	1	62 000	12 250
51	58	59	67	66	1	70 000	12 250
52	59	60	68	67	1	78.000	12.250
53	60	61	69	68	1	86 000	12 250
54	62	63	71	70	1	47 000	13 500
55	63	64	72	71	1	52 000	13.500
56	64	65	73	72	1	58 000	13.500
57	65	66	74	73	1	62 000	13 500
58	66	67	75	74	1	70 000	13 500
59	67	68	76	75	1	78 000	13 500
60	68	69	77	76	1	86.000	13 500
61	70	71	78	78	1	49 000	14 500
62	71	72	79	78	1	52 000	14 500
63	72	73	80	79	1	56 000	14 500
64	73	74	81	80	1	62.000	14 500
65	74	75	82	81	1	70 000	14 500
66	75	76	83	82	1	78.000	14 500
67	76	77	84	83	1	86 000	14 500
68	73	79	85	85	1	53 000	15 500
69	79	80	86	85	1	58 000	15 500
70	80	81	87	86	1	62 000	15 500
71	81	82	88	87	1	70 000	15 500
72	82	83	89	88	1	78.000	15 500
73	83	84	90	89	1	86 000	15 500
74	85	86	91	91	1	57 000	16.500
75	86	87	92	91	1	62.000	16 500
76	87	88	93	92	1	70 000	16 500
77	88	89	94	93	1	78 000	16 500
78	89	90	95	94	1	86 000	16 500

CONSTRUCTION LAYER INFORMATION

```
SSTIPN: 1 LAYER OF GEOTEXTILE, P=2400 PPI, E=5%, T=0

***********************************************************
***********************************************************
*                                                         *
*   LOAD CASE -----------------------------    1          *
*                                                         *
***********************************************************
***********************************************************

LARGEST ELE. NO  IN THIS INCREMENT   78

LARGEST N P  NO  IN THIS INCREMENT   95


BAND WIDTH-------------------------  40

TOTAL NUMBER OF EQUATIONS---------- 222

NUMBER OF EQUATIONS IN BLOCK------  85

NUMBER OF BLOCKS-----------------    3

NUMBER OF N P  FORCE CARDS--------   3

NUMBER OF PRESSURE CARDS----------   0
```

NODAL POINT FORCES (WEIGHTS OF ADDED ELEMENTS)

NP	X-FORCE	Y-FORCE
1	0.	0
2	0	0
3	0	0
4	0	0
5	0	0
6	0	0
7	0	0
8	0	0
9	0	0
10	0	0
11	0	0.
12	0	0.
13	0.	0
14	0	0
15	0	0.
16	0	0
17	0	0
18	0	0
19	0	0.
20	0	0
21	0	0
22	0	0
23	0	0
24	0	0
25	0	0.
26	0	0
27	0.	0.
28	0	0
29	0	0
30	0	0
31	0.	0
32	0.	0
33	0	0
34	0	0
35	0.	0.
36	0	0
37	0	0
38	0	0
39	0.	0
40	0	0
41	0.	0.
42	0	0
43	0	0.
44	0	0.
45	0	0
46	0	0
47	0	0
48	0	0.
49	0	0
50	0	0
51	0	0
52	0	0
53	0.	0
54	0	0
55	0	0
56	0	0
57	0	0.
58	0	0
59	0.	0
60	0.	0.
61	0.	0.
62	0.	0
63	0.	0
64	0.	0
65	0.	0
66	0	0
67	0	0
68	0	0
69	0.	0
70	0	0
71	0.	0
72	0	0
73	0	0.
74	0	0
75	0.	0
76	0	0
77	0	0.
78	0	0
79	0	0
80	0	0
81	0	0
82	0.	0
83	0	0
84	0	0
85	0	0
86	0	0.
87	0.	0
88	0	0
89	0.	0
90	0	0
91	0	0
92	0	-4.50
93	0	-4.50
94	0	-2.00
95	0	0

LOAD CASE : 1 ITERATION : 2

NP	DELTA-X	DELTA-Y	DELTA-ZZ	X-DISP	Y-DISP	ZZ-ROTAT	TOTAL	NP
1	0000	0000	0000	.0000	.0000	.0000	0000	1
2	.0000	0000	0000	.0000	0000	0000	0000	2
3	0000	0000	0000	0000	0000	0000	0000	3
4	0000	0000	0000	0000	0000	0000	0000	4
5	0000	0000	0000	.0000	.0000	.0000	0000	5
6	.0000	0000	.0000	.0000	.0000	.0000	0000	6
7	0000	0000	.0000	.0000	0000	0000	0000	7
8	0000	0000	0000	0000	0000	0000	0000	8
9	0000	.0000	.0000	0000	0000	0000	0000	9
10	.0000	0000	0000	0000	0000	0000	0000	10
11	.0000	0000	.0000	0000	.0000	0000	0000	11
12	0000	0000	0000	0000	0000	0000	0000	12
13	.0000	0000	.0000	0000	.0000	.0000	.0000	13
14	0000	0000	0000	.0000	.0000	.0000	0000	14
15	0000	0000	0000	- 0001	0000	0000	0001	15
16	0000	0000	0000	- 0001	- 0005	0000	0005	16
17	-.0004	.0001	0000	- 0045	.0020	.0000	0049	17
18	- 0177	0091	.0000	- 1837	0291	0000	1860	18
19	- 0343	- 0006	.0000	- 2587	- 0772	0000	.2700	19
20	- 0350	- 0089	0000	- 1547	- 1167	0000	1938	20
21	- 0231	-.0175	0000	- 0641	- 1404	0000	1543	21
22	-.0008	- 0012	.0000	- 0003	- 0055	0000	0055	22
23	- 0007	- 0014	0000	-.0001	-.0047	.0000	.0047	23
24	0008	- 0051	0000	0010	- 0103	0000	0103	24
25	.0020	- 0024	0000	.0019	-.0057	0000	0060	25
26	.0000	-.0001	.0000	0000	-.0031	0000	0031	26
27	.0000	0000	.0000	.0000	0000	0000	0000	27
28	0000	0000	0000	0001	- 0001	0000	0001	28
29	- 0001	0000	0000	- 0007	- 0003	.0000	0008	29
30	-.0146	0027	.0000	-.1241	.0474	0000	1328	30
31	-.0265	0173	.0000	-.2127	0581	0000	2205	31
32	- 0490	0052	0000	- 2845	- 1303	0000	3129	32
33	-.0776	- 0080	0000	-.2566	-.2255	0000	3416	33
34	- 0936	- 0194	.0000	-.2321	- 2300	0000	3267	34
35	- 0839	- 0451	.0000	- 1649	-.1782	0000	2428	35
36	0000	- 0035	0000	0022	- 01'9	0000	0121	36
37	0019	- 0098	.0000	.0016	- 0186	.0000	0187	37
38	.0028	- 0047	.0000	.0018	- 0112	0000	.0114	38
39	0000	0008	.0000	0000	- 0053	.0000	0053	39
40	0000	0000	0000	0000	0000	0000	0000	40
41	0000	0000	.0000	0001	- 0001	0000	0001	41
42	- 0176	0050	0000	- 0572	0200	0000	0606	42
43	- 0335	0059	0000	- 1306	0733	0000	1497	43
44	- 0338	0220	0000	- 1288	0581	0000	1405	44
45	- 0340	0077	0000	- 1244	- 1772	0000	.2165	45
46	- 0304	- 0084	0000	-.1057	- 3028	0000	3207	46
47	- 0250	-.0209	0000	- 0891	- 3071	0000	3198	47
48	- 0193	- 0679	0000	- 0698	- 2857	0000	2941	48
49	- 0023	- 0707	.0000	- 0269	-.1988	.0000	2007	49
50	.0017	- 0272	.0000	-.0051	- 0467	.0000	0470	50
51	.0010	- 0054	0000	- 0015	-.0139	0000	.0140	51
52	0000	0015	0000	0000	- 0097	0000	0097	52
53	- 0318	0222	.0000	- 1769	.0659	0000	1967	53
54	-.0350	.0079	0000	-.1079	- 1097	0000	1539	54
55	- 0400	- 0088	.0000	- 0992	-.2398	0000	.2595	55
56	- 0398	- 0382	0000	- 0941	- 2926	0000	3073	56
57	-.0198	- 0707	0000	- 1184	- 3140	0000	.3349	57
58	- 0081	-.0723	0000	-.0518	- 2277	.0000	2335	58
59	- 0036	- 0284	0000	-.0191	-.0467	.0000	.0476	59
60	-.0019	-.0057	0000	- 0043	-.0513	.0000	0515	60
61	.0000	.0018	0000	.0000	-.0457	.0000	.0457	61
62	-.0482	.0092	0000	- 0783	- 0290	0000	0835	62
63	-.0559	- 0075	.0000	- 0887	-.1346	0000	1612	63
64	- 0811	- 0387	0000	- 0952	- 1842	0000	.2073	64
65	- 0844	- 0764	.0000	-.0983	- 2198	0000	.2412	65
66	- 0171	- 0737	0000	- 0507	- 1612	0000	1690	66
67	-.0090	- 0290	0000	-.0250	- [illegible]26	0000	1251	67
68	- 0049	- 0080	.0000	- 0070	- 0127	0000	.0145	68
69	.0000	0019	0000	0000	-.0058	0000	0058	69
70	- 0504	0014	0000	- 0680	- 0456	0000	0818	70
71	- 0508	- 0072	.0000	- 0717	-.0881	0000	.1136	71
72	- 0520	- 0363	0000	- 0759	- 1344	.0000	1544	72
73	-.0585	- 0759	.0000	- 0832	-.1744	0000	1932	73
74	- 0895	- 2334	0000	- 0978	- 2995	0000	3150	74
75	-.0119	- 0297	0000	- 0274	- 1334	0000	1362	75
76	- 0073	-.0061	0000	- 0092	- 0119	0000	0151	76
77	.0000	0019	.0000	.0000	-.0045	0000	0045	77
78	- 0468	- 0072	0000	- 0573	- 0486	0000	0751	78
79	- 0441	- 0365	0000	- 0569	-.0883	0000	1050	79
80	-.0428	- 0752	.0000	- 0577	- 1284	0000	1408	80
81	- 0472	- 2344	.0000	- 0631	-.2739	0000	2811	81
82	2153	- 2905	0000	2050	- 3768	0000	4290	82
83	7452	- 0466	.0000	7432	- 0510	0000	7449	83
84	0000	0898	0000	.0000	0860	0000	0860	84
85	- 0345	- 0369	0000	- 0259	-.0546	.0000	.0671	85
86	- 0342	- 0749	0000	- 0400	- 0951	0000	1032	86
87	- 0303	- 3485	0000	- 0367	- 3666	.0000	3664	87
88	- 0237	- 5429	0000	- 0280	- 5989	0000	5995	88
89	5570	- 1060	0000	5553	- 1078	0000	5656	89
90	0000	2391	0000	0000	2270	0000	2370	90
91	0025	- 0748	0000	0025	- 0748	0000	0748	91
92	-.0012	- 3489	0000	- 0012	-.3489	0000	3489	92
93	- 0017	-.5445	0000	- 0017	- 5445	0000	5445	93
94	2832	- 2339	0000	2632	- 2339	0000	[illegible]	94
95	.0000	3790	.0000	0000	3790	0000	[illegible]	95

STRUCTURAL ELEMENTS - LINEAR ELASTIC

BAR ELEMENTS--INTERNAL MEMBER FORCES

ELEMENT NO	AXIAL FORCE
INCREMENTAL VALUES	
1	- 0240
2	- 0154
3	2165
4	6395
5	6848
6	1 0223
7	2403
8	- 0425
9	- 0605
TOTAL VALUES	
1	1415
2	3509
3	1 1232
4	1.9912
5	2.3120
6	2 5730
7	1 3117

8 2180
9 0872

FOUR NODE SOLID ELEMENTS - MODULI AND STRAINS (STRAINS IN PERCENT)

FLE	ELAS MOD	BULK MOD	SHEAR MOD	POIS	EPS-X	EPS-Y	GAM-XY	EPS-1	EPS-2	GAMMAX	ELE
1	523 4	328 3	226 8	155	000	000	001	001	- 001	001	1
2	520.5	330.4	224.2	161	000	008	005	007	- 001	008	2
3	549 8	343.1	238.8	152	022	- 019	045	.032	- 029	061	3
4	.6	17 1	.2	.494	1 493	-.389	2.128	1 972	- 868	2 840	4
5	7	17 3	2	494	825	801	6 415	3 821	-2 595	6 415	5
6	7	18.0	.2	.494	- 650	2 424	5 415	4 000	-2 226	6.227	6
7	7	18.4	2	493	-1 133	3 214	3 031	3.690	-1 609	5.299	7
8	6	17 0	2	.494	- 797	1.825	- 881	1 897	-.869	2 766	8
9	483 4	351 6	198 5	218	- 001	128	000	128	- 001	129	9
10	479.4	370 0	193.5	.238	- 007	187	023	.187	- 008	195	10
11	479.1	373 2	193.0	.241	- 006	.199	- 066	204	- 011	215	11
12	497 9	352 8	206 1	.206	012	110	- 040	114	008	106	12
13	431 4	253 4	192 8	120	000	001	- 002	001	- 001	002	13
14	481.3	264.7	201 7	119	004	- 003	011	.007	- 006	013	14
15	1.6	13 5	5	460	639	- 760	1 751	1 080	-1 181	2 241	15
16	11 2	17 3	4.1	382	2.232	-1 240	2 163	2 541	-1 549	4 090	16
17	1 6	17 0	5	484	1 223	401	3 389	2 546	- 922	3 468	17
18	.6	17 2	2	.494	-.624	2 898	2 970	3.241	-1 367	4 607	18
19	6	17 1	2	.494	-1.439	3 305	4 860	4 328	-2 460	6.785	19
20	.7	18.2	.2	.494	-1 637	4 370	3 210	4 772	-2 039	6.811	20
21	6	17 1	2	494	-1 046	2 998	1 660	3 162	-1 209	4 371	21
22	472 2	374 3	189.3	.247	- 003	.260	029	.261	- 004	265	22
23	407 1	305 8	185 6	.229	-.007	277	- 082	239	- 014	252	23
24	408 1	278.0	171.2	.192	023	129	- 051	135	017	117	24
25	409 0	229 7	187 2	093	- 001	000	001	000	- 001	001	25
26	0	1	0	495	290	- 339	643	502	- 550	1 052	26
27	4	13 4	1	495	983	- 770	546	1 025	- 812	1 837	27
28	2.1	13 6	7	474	724	- 392	-1 236	994	- 671	1 669	28
29	1 4	14 4	5	484	581	816	- 552	993	384	609	29
30	5	15 1	2	494	- 291	2 071	-3 603	3.128	-1 348	4 476	30
31	6	15.8	2	494	- 514	2 575	-4 789	3 879	-1 819	5 698	31
32	6	15 5	.2	494	-1 080	3 079	-4 882	4 206	-2 208	6 414	32
33	7	17 5	2	494	-1 313	4 908	-2 681	5 184	-1 589	6 773	33
34	8	17 2	3	492	- 133	3 563	- 311	3 590	- 139	3 729	34
35	231 0	213 7	83 5	291	- 024	513	- 085	516	- 027	543	35
36	342 8	216 6	148.0	158	002	118	- 009	118	002	116	36
37	1	4 0	0	495	- 014	797	3 413	2 145	-1 363	3 508	37
38	1	4 0	0	495	- 605	607	5 039	2 593	-2 590	5 183	38
39	40 4	403 2	13 8	483	- 162	650	1 416	1 080	- 572	1 632	39
40	1	4 0	0	495	- 281	2 074	1 341	2 253	- 440	2 693	40
41	1	4 0	0	495	051	3 972	2 441	4 321	- 297	4 619	41
42	154.4	416 6	53 8	435	- 654	3 870	1 776	4 038	- 822	4 860	42
43	829 7	547 9	247 0	275	- 324	2 936	- 310	2 943	- 332	3 275	43
44	1314 9	864 4	558 6	177	- 111	2 718	184	2 721	- 114	2 835	44
45	781 9	607 5	315 1	241	- 035	2 590	037	2 590	- 035	2 625	45
46	1	4 0	.0	495	- 059	- 042	1 446	673	- 775	1 448	46
47	11 9	398 6	4 0	495	058	- 039	1 555	788	- 769	1 558	47
48	11 9	398 6	4 0	495	019	035	2 216	1 135	-1 081	2 216	48
49	11 9	393 6	4 0	495	- 274	268	3 226	1 633	-1 639	3 272	49
50	1	4 0	0	495	- 421	337	1 668	884	- 967	1 851	50
51	1098 0	683 7	475.6	152	- 260	2 771	124	2 773	- 262	3 034	51
52	1906 3	1028.5	895 1	065	- 175	2 701	- 398	2 714	- 189	2 903	52
53	1384 1	741 2	653 3	059	- 066	067	032	069	- 068	137	53
54	228 7	425 6	81 4	404	106	- 055	041	109	- 057	166	54
55	505.6	464 0	196.2	289	111	- 020	069	119	- 029	148	55
56	522.6	486 8	203 9	282	118	- 030	148	149	- 061	210	56
57	1	4 0	0	495	- 216	8 002	3 154	8 295	509	8 803	57
58	1	4 0	0	495	- 567	10 677	1 674	10 755	- 645	11 400	58
59	2098 1	1048 0	1048 0	000	- 194	2 694	- 674	2 733	- 233	2 966	59
60	1157 0	622 4	544 4	063	- 096	061	041	063	- 102	165	60
61	284 9	433 0	103 2	381	063	- 006	058	073	- 016	090	61

62	194.7	421 5	68.6	419	020	006	194	110	- 084	194	62
63	543.5	469 8	213.5	273	.066	- 028	-.082	081	-.044	125	63
64	304 5	435 6	110.9	.373	.114	034	155	181	- 013	.175	64
65	1	4 0	0	495	-2.075	15 684	-12.895	17 778	-4 168	21 947	65
66	1	4.0	0	495	-3 429	17 677	-51.215	34 821	-20 573	55 394	66
67	1	4 0	0	495	4 588	-2 315	-38 515	20 701	-18 428	39 129	67
68	67.8	406 3	23 0	472	- 044	039	- 178	086	- 101	196	68
69	365.2	443 8	135.5	.347	002	007	067	038	- 029	067	69
70	1	4 0	0	495	010	5 894	1 423	5 781	- 078	5 859	70
71	1	4 0	0	495	-1 708	19 609	13 021	21 440	-3 539	24 979	71
72	1	4 0	0	495	-6.976	16.850	16 646	19 469	-9 595	29 065	72
73	1	4 0	0	495	8.122	-4 506	6 437	8.895	-5 279	14 174	73
74	1	4 0	.0	495	- 007	- 011	-2 723	1 353	-1 370	2.723	74
75	853 2	558 3	363 1	175	000	015	133	075	- 060	134	75
76	973.2	629 1	416 1	169	-.039	104	- 115	124	- 059	.183	76
77	1	4 0	0	495	-5.284	6 526	8 912	8 019	-6 777	14.796	77
78	1	4.0	.0	.495	5.126	- 554	8.707	7.484	-2.512	10.396	78

FOUR NODE SOLID ELEMENTS - STRESSES

ELE	SIG-X	SIG-Y	TAU-XY	SIG-1	SIG-3	TAU-MAX	THETA	SIG1/SIG3	LEVEL	ELE
1	242	478	002	478	242	118	432	1 979	079	1
2	248	515	012	516	247	134	2 577	2 085	088	2
3	349	392	106	481	.260	.110	39 424	1 849	072	3
4	.362	.534	004	535	362	086	1 421	1 476	1 724	4
5	379	558	.013	.559	378	081	4 198	1 480	1.815	5
6	468	661	012	662	468	097	3 481	1 415	1 941	6
7	522	720	007	721	.521	100	1 889	1 382	1 992	7
8	.339	.530	-.002	.530	339	095	- 508	1 563	1 908	8
9	329	1.029	- 003	1 029	329	350	- 238	3 129	210	9
10	404	1 358	045	1 362	402	480	2 706	3 384	267	10
11	439	1 432	- 126	1 448	422	513	-7 232	3 429	280	11
12	376	954	- 082	965	364	300	-7.946	2.649	174	12
13	136	.273	- 004	273	136	069	-1 599	2 018	052	13
14	152	281	022	285	148	059	11 036	1 795	044	14
15	079	158	007	159	078	040	5 013	2.024	403	15
16	.285	279	024	306	258	024	48 456	1 188	484	16
17	341	422	010	423	340	042	7.281	1 245	833	17
18	372	475	006	475	372	052	3 482	1 279	1 037	18
19	388	476	010	477	.387	055	5 322	1 300	1 101	19
20	520	635	.008	636	519	.058	3 844	1.225	1 168	20
21	384	491	003	492	.384	054	1 827	1.279	1.074	21
22	407	1 525	056	1 528	404	562	2 838	3 779	312	22
23	304	1 201	- 137	1 221	284	469	-8 481	4 305	296	23
24	.292	723	- 088	740	275	233	-11 053	2 695	149	24
25	.042	090	001	090	042	.024	1 500	2.157	021	25
26	000	000	000	000	000	000	63 371	642	-1 000	26
27	.060	000	- 001	060	000	030	-88 757	489 176	599	27
28	.070	035	- 033	090	.015	037	-58 834	5 991	746	28
29	154	.237	000	237	154	041	- 315	1 537	829	29
30	205	303	- 010	305	204	050	-5 867	1 493	1 006	30
31	.251	348	- 013	350	249	.051	-7 596	1.406	1 010	31
32	.241	.338	- 020	342	237	.052	-11 454	1 443	1 049	32
33	516	.623	-.009	.624	515	.055	-4 907	1 213	1 094	33
34	495	580	- 001	590	495	047	- 838	1 190	942	34
35	.435	1.661	-.043	1.662	433	.615	-2 010	3.835	332	35
36	117	387	- 034	392	113	139	-7.085	3.460	.109	36
37	041	087	-.061	.130	- 001	.065	-34.811	-111.500	-1.000	37
38	012	057	029	071	- 002	036	25 943	-32 857	-1 000	38
39	.076	.306	.175	.400	- 016	209	28.310	-22 145	-1.000	39
40	.018	.314	.008	314	.018	148	1.593	17 746	6.225	40
41	034	.326	.020	.327	033	147	3.928	9 918	3.315	41
42	- 291	353	084	364	- 302	333	7 327	-1 204	-1 000	42
43	-.172	1.120	- 612	1 364	- 416	.890	-21.716	-3.278	-1 000	43
44	115	1.118	140	1 137	.096	.521	7 794	11 815	4 020	44
45	019	447	060	.455	011	222	7 850	43 231	15 698	45
46	- 103	- 054	074	- 001	- 156	078	35 858	004	-1 000	46
47	065	188	183	320	-.066	.193	35.736	-4.809	-1 000	47
48	144	422	181	495	070	212	24 843	7 033	2 243	48
49	- 041	101	006	101	- 041	071	2 483	-2 459	-1 000	49
50	068	403	- 087	424	047	188	-13 677	8 984	2.980	50
51	- 736	899	- 439	1 009	- 846	928	-14 118	-1 193	-1 000	51
52	- 857	937	- 004	937	- 857	797	- 131	-1 427	-1 000	52
53	- 530	383	076	389	- 536	463	4 736	- 726	-1.000	53
54	400	103	072	417	086	165	77 089	4 831	1 424	54
55	814	151	171	858	108	373	76.380	7.817	2 534	55
56	896	085	332	1 012	- 051	532	70 657	-19 749	-1 000	56
57	474	606	- 116	675	405	135	-30 342	1 665	247	57
58	.343	474	- 064	500	317	092	-22 021	1.578	215	58
59	-1 159	1 017	- 269	1.050	-1 192	1 121	-6.937	- 881	-1 000	59
60	- 823	257	117	269	- 836	553	6 090	- 322	-1 000	60
61	102	066	- 174	.259	- 092	.175	-47 991	-2 812	-1 000	61
62	233	085	236	406	- 088	247	53 715	-4.628	-1 000	62
63	516	- 034	- 157	558	- 076	317	-75 190	-7 360	-1 000	63
64	770	635	108	830	575	128	60 969	1 444	165	64
65	552	.584	- 005	584	552	.016	-9 130	1 059	022	65
66	577	.610	- 020	620	567	027	-25 180	1 094	035	66
67	197	291	- 012	292	195	049	-7 415	1 500	186	67
68	- 015	008	- 016	014	- 023	019	-28 241	- 630	-1 000	68
69	110	.041	135	215	- 064	140	52 121	-3 371	-1 000	69
70	332	349	- 040	381	299	041	-38 974	1 278	103	70
71	722	756	005	757	721	018	8 491	1 049	018	71
72	401	437	007	438	400	019	10 119	1 096	035	72
73	242	257	005	258	241	009	15 752	1 073	027	73
74	008	016	001	016	006	004	6 489	2 135	422	74
75	044	176	485	599	- 379	489	41 123	-1 578	-1 000	75
76	- 167	1 033	- 481	1 202	- 336	769	-19 336	-3 578	-1 000	76
77	082	086	004	088	081	014	7 527	1 448	166	77
78	202	214	003	215	201	007	14 551	1 071	026	78

```
SSTIPN: 1 LAYER OF GEOTEXTILE, P:2[illegible] PPI, E:5%, T:1000

TOTAL NUMBER OF NODES------------------ 95
NUMBER OF BAR ELEMENTS----------------- 9
NUMBER OF DIFF  BAR MATERIALS---------- 1
NUMBER OF BEAM ELEMENTS---------------- 0
NUMBER OF DIFF  BEAM MATERIALS--------- 0
NUMBER OF NODAL LINKS ----------------- 0
NUMBER OF INTERFACE ELEMENTS----------- 0
NO  OF INTERFACE ELE  IN PREEXIST  PART 0
NUMBER OF INTERFACE ELE  IN FOUNDATION- 0
NUMBER OF INTERFACE MATERIALS---------- 0
TOTAL NUMBER OF SOIL ELEMENTS---------- 78
NUMBER OF DIFF  SOIL MATERIALS--------- 3
NUMBER OF ELEMENTS IN FOUNDATION------- 36
NUMBER OF NODES IN FOUNDATION---------- 52
NUMBER OF PREEXISTING ELEMENTS--------- 0
NUMBER OF PREEXISTING NODES------------ 0
NUMBER OF CONSTRUCTION LAYERS---------- 6
NUMBER OF LOAD CASES------------------- 2

CALING FACTOR ---------      1 00000

ATMOSPHERIC PRESSURE ---      1 05800

UNIT WEIGHT OF WATER ---        03120


OMPUTATION SEQUENCE FOR A TOTAL OF    8  INCREMENTS
---------------------------------------------------

 INCREMENT NO    1     APPLY LOAD CASE   1

 INCREMENT NO    2     PUT ON LAYER NO   1

 INCREMENT NO    3     PUT ON LAYER NO   2

 INCREMENT NO    4     PUT ON LAYER NO   3

 INCREMENT NO    5     PUT ON LAYER NO   4

 INCREMENT NO    6     PUT ON LAYER NO   5

 INCREMENT NO    7     PUT ON LAYER NO   6

 INCREMENT NO    8     APPLY LOAD CASE   2
```

NODAL POINT INPUT DATA

NODE NUMBER	NODAL POINT COORDINATES X-ORD	Y-ORD	B.C CODE X	Y	ZZ
1	.000	.000	1	1	1
2	10.000	.000	1	1	1
3	20.000	.000	1	1	1
4	30.000	.000	1	1	1
5	36.000	.000	1	1	1
6	42.000	.000	1	1	1
7	50.000	.000	1	1	1
8	54.000	.000	1	1	1
9	58.000	.000	1	1	1
10	66.000	.000	1	1	1
11	74.000	.000	1	1	1
12	82.000	.000	1	1	1
13	90.000	.000	1	1	1
14	.000	4.000	1	0	1
15	10.000	4.000	0	0	0
16	20.000	4.000	0	0	0
17	30.000	4.000	0	0	0
18	36.000	4.000	0	0	0
19	42.000	4.000	0	0	0
20	50.000	4.000	0	0	0
21	54.000	4.000	0	0	0
22	58.000	4.000	0	0	0
23	66.000	4.000	0	0	0
24	74.000	4.000	0	0	0
25	82.000	4.000	0	0	0
26	90.000	4.000	1	0	1
27	.000	7.000	1	0	1
28	10.000	7.000	0	0	0
29	20.000	7.000	0	0	0
30	30.000	7.000	0	0	0
31	36.000	7.000	0	0	0
32	42.000	7.000	0	0	0
33	50.000	7.000	0	0	0
34	54.000	7.000	0	0	0
35	58.000	7.000	0	0	0
36	66.000	7.000	0	0	0
37	74.000	7.000	0	0	0
38	82.000	7.000	0	0	0
39	90.000	7.000	1	0	1
40	.000	10.000	1	0	1
41	10.000	10.000	0	0	0
42	20.000	10.000	0	0	0
43	30.000	10.000	0	0	0
44	36.000	10.000	0	0	0
45	42.000	10.000	0	0	0
46	50.000	10.000	0	0	0
47	54.000	10.000	0	0	0
48	58.000	10.000	0	0	0
49	66.000	10.000	0	0	0
50	74.000	10.000	0	0	0
51	82.000	10.000	0	0	0
52	90.000	10.000	1	0	1
53	36.000	11.500	0	0	0
54	42.000	11.500	0	0	0
55	50.000	11.500	0	0	0
56	54.000	11.500	0	0	0
57	58.000	11.500	0	0	0
58	66.000	11.500	0	0	0
59	74.000	11.500	0	0	0
60	82.000	11.500	0	0	0
61	90.000	11.500	1	0	1
62	42.000	13.000	0	0	0
63	50.000	13.000	0	0	0
64	54.000	13.000	0	0	0
65	58.000	13.000	0	0	0
66	66.000	13.000	0	0	0
67	74.000	13.000	0	0	0
68	82.000	13.000	0	0	0
69	90.000	13.000	1	0	1
70	46.000	14.000	0	0	0
71	50.000	14.000	0	0	0
72	54.000	14.000	0	0	0
73	58.000	14.000	0	0	0
74	66.000	14.000	0	0	0
75	74.000	14.000	0	0	0
76	82.000	14.000	0	0	0
77	90.000	14.000	1	0	1
78	50.000	15.000	0	0	0
79	54.000	15.000	0	0	0
80	58.000	15.000	0	0	0
81	66.000	15.000	0	0	0
82	74.000	15.000	0	0	0
83	82.000	15.000	0	0	0
84	90.000	15.000	1	0	1
85	54.000	16.000	0	0	0
86	58.000	16.000	0	0	0
87	66.000	16.000	0	0	0
88	74.000	16.000	0	0	0
89	82.000	16.000	0	0	0
90	90.000	16.000	1	0	1
91	58.000	17.000	0	0	0
92	66.000	17.000	0	0	0
93	74.000	17.000	0	0	0
94	82.000	17.000	0	0	0
95	90.000	17.000	1	0	1

BAR ELEMENTS-------

MATERIAL NUMBER	E	AREA	WEIGHT/LENGTH
1	480	1 00	0

ELMT NO	CONNECTED NODES I	J	MATL NO.
1	43	44	1
2	44	45	1
3	45	46	1
4	46	47	1
5	47	48	1
6	48	49	1
7	49	50	1
8	50	51	1
9	51	52	1

SOIL MATERIAL PROPERTY DATA

		YOUNG'S MODULUS			BULK MODULUS		STRENGTH PARAMETERS			
MATL	UNIT WT	CONSTANT	EXPONENT	RATIO	CONSTANT	EXPONENT	C	PHI	DPHI	KO
1	0880	8000 00	500	500	1500 00	.800	00	35 00	00	50
2	0530	40 00	300	900	20 00	200	05	00	00	50
3	.0800	1000 00	400	700	500 00	500	50	40 00	00	50

FOUR NODES SOLID ELEMENT DATA

ELET NO	CONNECTED NODES I	J	K	L	MATL NO	ELEMENT CENTER COORDINATES X-ORD	Y-ORD
1	1	2	15	14	3	5 000	2.000
2	2	3	16	15	3	15.000	2.000
3	3	4	17	16	3	25 000	2 000
4	4	5	18	17	2	33.000	2.000
5	5	6	19	12	2	39.000	2.000
6	6	7	20	19	2	46 000	2.000
7	7	8	21	20	2	52 000	2 000
8	8	9	22	21	2	58.000	2.000
9	9	10	23	22	3	67 000	2 000
10	10	11	24	23	3	70.000	2 000
11	11	12	25	24	3	78 000	2 000
12	12	13	26	25	3	86.000	2.000
13	14	15	28	27	3	5.000	5.500
14	15	16	29	28	3	15.000	5 500
15	16	17	30	29	2	25 000	5 500
16	17	18	31	30	2	33 000	5.500
17	18	19	32	31	2	39 000	5.500
18	19	20	33	32	2	46.000	5.500
19	20	21	34	33	2	52.000	5.500
20	21	22	35	34	2	58 000	5.500
21	22	23	36	35	2	62.000	5 500
22	23	24	37	36	3	70.000	5.500
23	24	25	38	37	3	78.000	5 500
24	25	26	39	38	3	86.000	5.500
25	27	28	41	40	3	5 000	8 500
26	28	29	42	41	2	15.000	8.500
27	29	30	43	42	2	25.000	8.500
28	30	31	44	43	2	33.000	8.500
29	31	32	45	44	2	39 000	8 500
30	32	33	46	45	2	46.000	8.500
31	33	34	47	46	2	52.000	8.500
32	34	35	48	47	2	56.000	8 500
33	35	36	49	48	2	62 000	8 500
34	36	37	50	49	2	70 000	8 500
35	37	38	51	50	3	78 000	8 500
36	38	39	52	51	3	86.000	8 500
37	43	44	53	53	1	34.500	10 750
38	44	45	54	53	1	39 000	10 750
39	45	46	55	54	1	46 000	10 750
40	46	47	56	55	1	52 000	10.750
41	47	48	57	56	1	56 000	10 750
42	48	49	58	57	1	62 000	10 750
43	49	50	59	58	1	70 000	10 750
44	50	51	60	59	1	78 000	10 750
45	51	52	61	60	1	86 000	10 750
46	53	54	62	62	1	40 500	12 250
47	54	55	63	62	1	46.000	12 250
48	55	56	64	63	1	52 000	12 250
49	56	57	65	64	1	56 000	12 250
50	57	58	66	65	1	62 000	12 250
51	58	59	67	66	1	70.000	12 250
52	59	60	68	67	1	78 000	12 250
53	60	61	69	68	1	86 000	12 250
54	62	63	71	70	1	47 000	13 500
55	63	64	72	71	1	52 000	13.500
56	64	65	73	72	1	56 000	13 500
57	65	66	74	73	1	62 000	13 500
58	66	67	75	74	1	70 000	13 500
59	67	68	76	75	1	78 000	13 500
60	68	69	77	76	1	86 000	13 500
61	70	71	78	78	1	49 000	14 500
62	71	72	79	78	1	52 000	14 500
63	72	73	80	79	1	55 000	14 500
64	73	74	81	80	1	62 000	14 500
65	74	75	82	81	1	70 000	14 500
66	75	76	83	82	1	78 000	14.500
67	76	77	84	83	1	86 000	14 500
68	78	79	85	85	1	53 000	15 500
69	79	80	86	85	1	56 000	15 500
70	80	81	87	86	1	62 000	15 500
71	81	82	88	87	1	70 000	15 500
72	82	83	89	88	1	78 000	15 500
73	83	84	90	89	1	86 000	15 500
74	85	86	91	91	1	57 000	16 500
75	86	87	92	91	1	62 000	16 500
76	87	88	93	92	1	70 000	16 500
77	88	89	94	93	1	78 000	16 500
78	89	90	95	94	1	86 000	16 500

CONSTRUCTION LAYER INFORMATION

NODAL POINT FORCES (WEIGHTS OF ADDED ELEMENTS)

NP	X-FORCE	Y-FORCE
1	0.	0
2	0	0
3	0	0
4	0	0
5	0	0
6	0	0
7	0	0.
8	0.	0
9	0.	0.
10	0	0
11	0	0.
12	0.	0
13	0.	0
14	0	0
15	0	0
16	0	0
17	0	0
18	0	0
19	0.	0
20	0.	0.
21	0	0
22	0	
23	0	
24	0	
25	0.	
26	0	0
27	0	0
28	0.	0
29	0	0
30	0	0
31	0	0
32	0	0
33	0	0
34	0	0
35	0	0
36	0	0
37	0.	0
38	0	0
39	0	0
40	0	0
41	0	0.
42	0	0
43	0	0.
44	0	0
45	0	0.
46	0	0
47	0	0
48	0	0
49	0	0
50	0	0
51	0	0
52	0	0
53	0	0.
54	0	0
55	0.	0
56	0	0.
57	0	0
58	0	0
59	0.	0.
60	0	0.
61	0.	0.
62	0.	0.
63	0	0
64	0	0
65	0.	0.
66	0	0
67	0	0.
68	0	0
69	0	0
70	0	0
71	0	0
72	0	0
73	0	0.
74	0.	0.
75	0	0.
76	0	0
77	0	0
78	0	0
79	0	0
80	0	0
81	0	0
82	0	0
83	0	0
84	0	0
85	0	0
86	0.	0.
87	0	0
88	0	0
89	0	0
90	0	0
91	0	0.
92	0	-4 50
93	0	-4 50
94	0	-2 00
95	0	0

```
SSTIPN: 1 LAYER OF GEOTEXTILE, P=2400 PPI, E=5%, T=1000

****************************************************
****************************************************
*                                                  *
*  LOAD CASE - ---------------------------   2     *
*                                                  *
****************************************************
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LARGEST ELE  NO  IN THIS INCREMENT   78

LARGEST N P  NO  IN THIS INCREMENT   95


BAND WIDTH----------------------- 40

TOTAL NUMBER OF EQUATIONS--------- 222

NUMBER OF EQUATIONS IN BLOCK------ 84

NUMBER OF BLOCKS-----------------   3

NUMBER OF N P  FORCE CARDS-------   3

NUMBER OF PRESSURE CARDS---------   0
```

LOAD CASE : 2 ITERATION : 2

NP	DELTA-X	DELTA-Y	DELTA-ZZ	X-DISP	Y-DISP	ZZ-RCTAT	TOTAL	NP
1	0000	0000	.0000	0000	.0000	0000	0000	1
2	.0000	0000	0000	0000	.0000	0000	0000	2
3	0000	0000	0000	0000	.0000	0000	0000	3
4	0000	0000	0000	0000	0000	0000	0000	4
5	.0000	.0000	0000	.0000	0000	0000	.0000	5
6	.0000	0000	.0000	.0000	.0000	.0000	0000	6
7	0000	0000	.0000	.0000	.0000	0000	0000	7
8	0000	0000	0000	0000	0000	0000	0000	8
9	.0000	.0000	0000	0000	.0000	0000	.0000	9
10	.0000	.0000	.0000	.0000	0000	0000	0000	10
11	.0000	.0000	.0000	.0000	0000	0000	0000	11
12	.0000	0000	0000	0000	0000	0000	0000	12
13	.0000	.0000	0000	.0000	0000	.0000	0000	13
14	0000	.0000	0000	0000	.0000	0000	0000	14
15	.0000	0000	0000	- 0001	.0000	0000	0001	15
16	0000	0000	0000	- 0002	- 0006	0000	0006	16
17	- 0003	.0001	0000	- 0045	0023	0000	.0051	17
18	- 0152	0066	0000	- 1893	.0333	.0000	1922	18
19	- 0390	0054	0000	- 2712	-.0747	0000	2812	19
20	- 0457	- 0091	0000	- 1850	- 1193	0000	2037	20
21	- 0297	-.0233	0000	- 0885	- 1463	0000	.1620	21
22	- 0011	- 0015	.0000	- 0005	- 0058	0000	0058	22
23	-.0007	-.0014	0000	- 0002	- 0048	0000	0048	23
24	0007	- 0053	0000	0008	- 0103	0000	0103	24
25	.0020	- 0023	0000	0018	- 0056	0000	0059	25
26	0000	.0001	0000	0000	- 0030	0000	.0030	26
27	.0000	0000	0000	.0000	0001	0000	.0001	27
28	0000	0000	0000	0000	- 0001	0000	0001	28
29	-.0001	0000	.0000	- 0010	- 0003	0000	.0010	29
30	- 0116	.0023	.0000	- 1660	0576	0000	1757	30
31	- 0214	0184	0000	-.2501	.0579	0000	2567	31
32	- 0441	0175	0000	- 2848	- 1296	0000	3129	32
33	- 0883	- 0100	0000	- 2615	-.2277	0000	3467	33
34	- 1027	- 0300	0000	-.2378	-.2406	0000	3383	34
35	- 0882	-.0512	.0000	-.1883	- 1439	0000	2479	35
36	.0002	- 0034	0000	0018	- 0123	0000	0124	36
37	.0017	-.0102	.0000	0011	- 0188	0000	0188	37
38	.0026	-.0046	0000	0014	- 0111	0000	0112	38
39	0000	0012	0000	0000	- 0061	0000	0061	39
40	0000	0000	0000	0000	0001	0000	0001	40
41	0000	0000	.0000	.0001	- 0001	0000	.0002	41
42	-.0116	.0038	.0000	-.0662	0236	0000	0704	42
43	- 0240	0081	.0000	- 1619	0953	0000	1879	43
44	-.0241	.0211	0000	- 1558	0422	0000	1614	44
45	- 0238	0248	0000	- 1460	- 1789	0000	2309	45
46	- 0222	- 0095	0000	-.1225	- 3047	0000	3285	46
47	- 0207	- 0321	.0000	- 1065	- 3195	0000	.3368	47
48	- 0189	- 0787	0000	- 0880	- 2965	0000	3093	48
49	- 0039	- 0899	0000	- 0404	- 2045	0000	.2084	49
50	.0007	-.0274	.0000	- 0124	- 0448	0000	0464	50
51	.0003	- 0050	0000	- 0051	- 0150	0000	0158	51
52	0000	0019	0000	0000	- 0096	0000	0096	52
53	- 0842	0214	0000	- 2419	0887	0000	2577	53
54	-.1118	.0292	.0000	-.1876	-.0942	0000	2099	54
55	-.0989	- 0258	.0000	-.1808	- 2581	0000	3041	55
56	- 0787	- 0547	0000	- 1328	- 3110	0000	3382	56
57	- 0251	-.0816	0000	- 1234	- 3202	0000	.3432	57
58	- 0091	-.0714	0000	-.0537	-.2235	0000	2299	58
59	- 0049	-.0291	0000	-.0203	- 0863	0000	0887	59
60	-.0027	-.0056	.0000	-.0051	-.0513	0000	.0516	60
61	0000	.0022	.0000	0000	- 0453	0000	.0453	61
62	- 1038	.0286	0000	-.1351	- 0131	0000	1357	62
63	-.1027	- 0277	.0000	- 1375	- 1525	0000	.2053	63
64	- 1043	- 0615	0000	- 1394	-.2056	0000	.2484	64
65	-.1036	-.0941	0000	- 1392	- 2342	0000	2725	65
66	- 0177	- 0727	0000	- 0516	- 1583	0000	1665	66
67	-.0103	- 0297	0000	- 0265	- 1231	0000	1259	67
68	- 0061	-.0060	0000	-.0082	- 0128	0000	0153	68
69	.0000	.0022	.0000	0000	- 0055	0000	.0055	69
70	- 0964	0004	0000	- 1155	- 0474	0000	1248	70
71	- 0959	-.0278	0000	- 1176	- 1072	0000	1590	71
72	-.0954	- 0813	0000	- 1197	- 1575	0000	1978	72
73	- 0969	-.0940	0000	- 1260	- 1909	0000	2287	73
74	- 1112	- 2384	0000	- 1397	- 30[illegible]	0000	3342	74
75	-.0133	-.0304	.0000	- 0310	- 1338	0000	1373	75
76	-.0087	-.0060	0000	- 0109	- 0120	0000	0162	76
77	0000	0020	0000	0000	- 0043	0000	0043	77
78	-.0887	- 0279	0000	- 0993	- 0680	0000	1203	78
79	- 0884	- 0614	0000	-.1013	- 1[illegible]19	0000	1509	79
80	-.0870	- 0833	0000	- 1018	- 1454	0000	1775	80
81	-.0904	-.2396	0000	-.1062	- 2786	0000	2981	81
82	1889	- 2926	0000	1775	- 3536	0000	3956	82
83	7285	-.0472	0000	.6942	- 0725	0000	6980	83
84	.0000	0887	0000	0000	0872	0000	0872	84
85	-.0799	-.0815	0000	- 0844	- 0791	.0000	.1157	85
86	- 0802	- 0531	0000	- 0861	1132	0000	1422	86
87	-.0787	- 3575	.0000	-.0631	- 3763	0000	3644	87
88	- 0690	- 5440	0000	- 0731	- 6001	0000	6045	88
89	.5303	- 1087	0000	5291	- 1114	0000	.5407	89
90	0000	2357	0000	0000	2336	0000	2336	90
91	-.0449	- 0930	.0000	- 0449	- 0930	0000	1032	91
92	- 0482	- 3579	0000	- 0482	- 3579	0000	3612	92
93	- 0482	- 5459	0000	- 0482	- 5459	0000	5480	93
94	2342	- 2409	0000	2342	- 2409	0000	3360	94
95	0000	3721	0000	0000	3721	0000	3721	95

STRUCTURAL ELEMENTS - LINEAR ELASTIC

BAR ELEMENTS--INTERNAL MEMBER FORCES

ELEMENT NO	AXIAL FORCE
INCREMENTAL VALUES	
1	- 0120
2	.0227
3	.0[illegible]9
4	1758
5	2207
6	8988
7	.2757
8	- 0206
9	- 0190
TOTAL VALUES	
1	4884
2	7819
3	1 4108
4	1 9235
5	2 2138
6	2 8570
7	1 6836

8	4382
9	.3051

FOUR NODE SOLID ELEMENTS - MODULI AND STRAINS (STRAINS IN PERCENT)

ELE	ELAS MOD	BULK MOD	SHEAR MOD	POIS	EPS-X	EPS-Y	GAM-XY	EPS-1	EPS-3	GAMMAX	ELE
1	524 8	329 2	227 1	155	001	000	001	001	- 001	002	1
2	521 2	331 5	224 3	.182	000	.007	007	009	- 001	010	2
3	542.0	338 2	235.2	.152	022	- 021	.045	.031	- 030	062	3
4	.6	17 1	2	464	1.540	- 444	2 184	2.016	-.920	2 936	4
5	7	17 3	2	484	882	517	6 855	3.928	-2 729	6 657	5
6	.7	18 0	2	.494	- 663	2.425	5 732	4 138	-2 374	6.511	6
7	7	18.4	2	483	-1 194	3 321	3 289	3 850	-1 724	5.574	7
8	.6	17 0	.2	494	- 683	1 901	- 882	1 970	- 932	2 901	8
9	487 2	355 0	199 9	218	- 001	131	002	131	-001	133	9
10	480 4	370 8	194 0	238	- 007	188	027	189	- 008	197	10
11	478 2	371 3	192.8	240	- 008	198	- 062	203	-.010	213	11
12	498.1	352 0	205 2	208	011	107	- 038	111	007	103	12
13	433 7	254 9	193 5	120	000	001	- 002	002	000	002	13
14	456.2	287 6	203.8	119	006	- 003	014	008	-.007	017	14
15	1 9	13 8	8	.478	847	- 928	2.400	1.482	-1.533	2 985	15
16	6 8	18 8	3 1	407	2 241	-1 333	3 444	2.938	-2.027	4 963	16
17	1 0	18 7	3	490	971	506	3 703	2 805	-1 128	3 732	17
18	8	17 2	2	494	- 809	2.722	2 728	3.188	-1 275	4.462	18
19	8	17 1	.2	494	-1.490	3.378	4 909	4 401	-2.513	6 914	19
20	7	18.2	.2	494	-1 756	4 540	3 102	4 902	-2 117	7 019	20
21	8	17 2	2	494	-1 052	3 095	1 851	3 253	-1 210	4 463	21
22	484 6	370 2	186 0	249	- 002	267	037	.268	- 004	272	22
23	400 3	299 9	162.9	228	- 008	234	- 075	240	-.014	253	23
24	405 6	277 0	169.9	193	.020	127	- 048	132	015	118	24
25	409 0	229 7	187 2	093	- 001	000	001	000	- 001	001	25
26	0	1	0	495	337	- 401	968	576	- 641	1 217	26
27	.4	13 4	1	495	1 303	-1 029	373	1 318	-1 044	2.362	27
28	2 3	13 8	.8	472	650	-.387	-1 199	928	- 645	1 573	28
29	7 8	15 4	2 8	410	208	1 083	- 481	1 144	148	998	29
30	5	15 2	2	494	- 293	2 105	-3.230	2.918	-1 105	4 023	30
31	8	16 8	2	494	- 497	2 598	-4.159	3 643	-1 541	5 184	31
32	.6	15 5	2	.494	-1 124	3.191	-4 489	4 148	-2 090	6 226	32
33	7	17 9	2	494	-1 348	5 079	-2 248	5 270	-1 539	6 809	33
34	9	17 2	3	481	- 171	3.636	- 030	3 637	- 171	3 807	34
35	239 4	219 4	92 9	288	- 047	497	098	501	- 052	553	35
36	343 1	216 7	148 1	.158	- 023	139	037	141	- 025	166	36
37	1	4 0	0	495	- 022	823	8 217	4 531	-3 729	8 260	37
38	1	4 0	0	495	- 487	467	10 154	5 092	-5 111	10 203	38
39	1	4 0	0	495	- 288	1 040	6 883	3 879	-3 107	6 987	39
40	1	4 0	0	495	- 504	2 838	5 103	4 217	-1 883	6 100	40
41	1	4 0	0	495	- 298	4 209	3 797	4 901	- 990	5 891	41
42	200 8	422 7	70 8	418	- 675	3.893	1 816	4 067	- 849	4 915	42
43	586 9	504 8	230 8	271	- 338	2 959	- 293	2 966	- 344	3 310	43
44	721.8	642 1	281 8	.281	- 118	2 742	173	2 745	- 121	2 866	44
45	651 0	559 0	258 1	271	- 044	2 595	038	2 596	- 044	2 640	45
46	1	4 0	0	.495	164	084	- 227	258	010	248	46
47	11 3	398 8	4.0	495	- 097	124	912	483	- 456	938	47
48	11.9	398 6	4 0	495	- 321	342	2 097	1 110	-1 090	2 199	48
49	11 9	398 4	4 0	495	- 720	704	4 378	2 294	-2 310	4 604	49
50	1	4 0	0	495	- 694	564	2 616	1 386	-1 516	2 903	50
51	1231 7	733 0	548 2	127	- 259	2 768	156	2 770	- 261	3 031	51
52	1885 4	1018 8	884 3	066	- 179	2 703	- 373	2 715	- 191	2 908	52
53	894.3	585 1	380 7	175	- 078	075	044	078	- 082	160	53
54	151 2	418 2	52 6	437	024	- 001	084	046	- 023	069	54
55	528.7	487 2	205.6	280	024	012	048	045	- 008	051	55
56	517 2	465 3	201 4	284	.054	- 002	142	107	- 050	153	56
57	1	4 0	0	495	- 463	8 321	5 169	9 025	-1 167	10 193	57
58	1	4 0	.0	495	803	10 969	4 023	11 303	1 137	12 441	58
59	2080 5	1040 2	1040 2	000	- 209	2 687	- 550	2 713	- 235	2 948	59
60	828 7	518 4	359 2	154	- 117	071	081	076	- 121	197	60
61	842.9	521 0	387.2	148	021	- 009	174	094	- 032	175	61

62	114.9	411.8	39 5	452	026	002	193	112	- 063	195	62
63	538 9	468.6	210 0	.276	.052	- 027	- 108	079	- 055	133	63
64	310.7	436.4	113.4	.370	102	045	158	.158	- 010	168	64
65	1	4.0	.0	495	-2 410	14.511	-11.812	16.368	-4 288	20 636	65
66	1	4 0	0	495	-3.308	17 568	-47 347	33 003	-18 742	51 745	66
67	1	4 0	0	495	4 274	- 286	-36 151	20 209	-16 230	36 439	67
68	114.8	411 8	39.5	.452	019	.006	033	.030	- 006	035	68
69	353.3	442.2	130 6	.352	007	-.007	048	.025	- 025	050	69
70	.1	4.0	.0	.495	005	5.891	1 533	5 989	- 083	6 082	70
71	1	4 0	0	495	-1 809	19 756	13 253	21 816	-3 869	25 685	71
72	1	4 0	0	.495	-7.173	16 952	13.016	19.945	-10 166	30 111	72
73	1	4.0	.0	495	7.850	-4.241	6.966	8.791	-5 172	13.983	73
74	.1	4.0	.0	.495	.005	-.013	-2.743	1 389	-1 373	2.743	74
75	884 1	587 1	379 2	166	- 002	016	120	068	- 053	121	75
76	888.2	596.6	383.6	.195	-.048	115	- 124	136	- 069	205	76
77	.1	4.0	.0	.495	-6 510	6 701	9 135	8 220	-7 029	15 250	77
78	.1	4 0	0	495	4.778	- 216	8.819	7.348	-2 786	10.135	78

FOUR NODE SOLID ELEMENTS - STRESSES

ELE	SIG-X	SIG-Y	TAU-XY	SIG-1	SIG-3	TAU-MAX	THETA	SIG1/SIG3	LEVEL	ELE
1	.243	.480	.003	480	.243	118	.757	1 974	.078	1
2	250	521	.016	522	249	136	3 420	2 093	080	2
3	.344	382	107	471	.254	109	40 030	1 854	071	3
4	361	532	.004	533	360	086	1 446	1 477	1.720	4
5	.374	.553	014	554	373	090	4 345	1 185	1.810	5
6	466	659	012	660	466	097	3 681	1 417	1 943	6
7	530	.729	007	729	.529	100	2 140	1 378	2.000	7
8	.340	.532	- 002	.532	.340	096	-.507	1 562	1.914	8
9	335	1.057	.003	1.057	.335	361	264	3 160	216	9
10	409	1 370	053	1 373	406	483	3 163	3 381	268	10
11	433	1.421	- 120	1 436	.419	508	-6.828	3.428	.278	11
12	366	932	-.078	943	395	294	-7 744	2.856	172	12
13	.137	.275	- 003	.275	137	069	-1.402	2 002	.052	13
14	158	259	028	286	151	057	14 589	1 781	043	14
15	085	162	.010	163	.085	039	7 404	1 914	778	15
16	.259	.274	020	.288	.246	021	34 445	1 172	423	16
17	315	401	008	.402	.314	044	5 151	1 279	876	17
18	379	482	006	482	378	052	3 236	1 274	1 038	18
19	371	480	010	481	.370	.055	5.361	1 299	1.107	19
20	528	.646	.008	648	.528	059	3.878	1 224	1.182	20
21	400	.508	.003	.508	400	054	1.844	1.270	1.079	21
22	420	1 540	070	1 544	416	564	3 561	3 711	310	22
23	.287	1.188	-.122	1.205	.280	462	-7 681	4 297	293	23
24	274	.706	- 083	722	259	231	-10.521	2 790	151	24
25	042	.080	001	080	.042	024	1.610	2.141	021	25
26	004	- 001	003	008	- 002	004	64 087	-2 688	-1 000	26
27	078	.001	013	.079	- 001	040	80 288	-54 181	-1 000	27
28	057	.051	- 038	.092	.017	038	-47 221	5 525	.754	28
29	.172	.193	- 023	208	157	025	-33 103	1 322	506	29
30	209	314	- 009	314	208	053	-4 858	1 510	1 081	30
31	281	354	- 014	358	.259	049	-8.439	1 376	973	31
32	252	.353	- 018	356	.249	054	-10.039	1 432	1 074	32
33	.536	640	- 012	641	535	053	-6.569	1 199	1.063	33
34	496	585	016	588	496	048	9 881	1 186	921	34
35	.419	1.656	-.021	1.666	.419	624	-.971	3.979	.342	35
36	.091	.371	-.024	.373	.089	142	-4.918	4 202	115	36
37	051	.095	- 064	140	.005	068	-35 538	29 332	10 531	37
38	006	062	033	069	- 011	040	27 779	-6 074	-1 000	38
39	.057	.290	.085	.324	.024	150	19.882	13.780	4.743	39
40	050	.338	018	340	049	145	3 572	6.940	2.208	40
41	.027	.321	016	322	026	148	3.071	12 211	4 187	41
42	- 419	.362	.141	387	-.443	415	3.811	- 873	-1.000	42
43	-.149	1.171	- 557	1 374	-.352	863	-20.083	-3.900	-1.000	43
44	.202	1 058	.134	1 079	182	448	8.705	5 934	1 834	44
45	- 024	.453	057	460	-.040	250	6.538	-11 484	-1.000	45
46	- 080	-.032	084	031	-.143	087	36 949	- 218	-1.000	46
47	086	.231	154	.329	- 012	170	32.426	-27 582	-1 000	47
48	- 020	320	149	378	- 078	228	20 599	-4 983	-1 000	48
49	- 125	099	040	106	- 132	119	9.938	- 807	-1.000	49
50	.060	.398	-.078	.414	.044	185	-12 165	9 425	3 132	50
51	- 780	.922	- 445	1 032	- 890	981	-13.824	-1 160	-1.000	51
52	- 731	849	047	850	- 732	841	1 601	-1 288	-1 000	52
53	- 446	353	109	.367	- 461	414	7.603	- 797	-1 000	53
54	171	089	098	236	024	106	58.325	9 709	3 237	54
55	.364	144	.134	419	.079	170	64.127	5 321	1.606	55
56	550	089	319	713	- 074	393	62 939	-9 587	-1 000	56
57	467	608	-.116	674	.401	136	-29 280	1 678	.252	57
58	.342	.478	- 061	501	319	091	-20.927	1 572	212	58
59	-1 168	1 030	-.233	1.054	-1.192	1 123	-5 978	- 884	-1.000	59
60	- 730	240	117	254	- 744	499	6 778	- 341	-1 000	60
61	.027	.083	-.006	084	026	029	-5.700	3.230	829	61
62	.283	.075	177	370	-.032	201	59 014	-11 625	-1 000	62
63	418	- 052	-.207	.496	- 131	313	-69 280	-3 801	-1.000	63
64	739	666	114	822	582	120	53 821	1 412	153	64
65	540	577	000	577	.540	019	398	1.069	025	65
66	577	611	- 019	.619	.569	025	-24.145	1 088	.033	66
67	.200	275	- 014	278	197	040	-10 406	1 411	153	67
68	127	103	032	149	080	035	55 279	1 861	320	68
69	.095	- 022	.105	159	- 086	122	59 215	-1 849	-1 000	69
70	.335	357	- 040	.388	305	041	-37.137	1 270	.100	70
71	724	.758	008	.759	.723	018	9.011	1 050	018	71
72	397	433	007	435	396	019	10 813	1 098	037	72
73	.233	258	004	258	.232	013	9 108	1 112	042	73
74	.008	.017	001	017	008	004	8 430	2 055	392	74
75	030	.184	483	587	-.353	480	40.179	-1 605	-1 000	75
76	- 177	1 027	- 450	1 178	- 327	752	-18 375	-3 600	-1 000	76
77	060	080	004	087	059	014	7 619	1 468	.174	77
78	201	.214	004	215	200	007	14.186	1 074	028	78

```
SSTIPN  1 LAYER OF GEOTEXTILE, P=4000 PPI, E=5%, EXTENDED, T=1000

TOTAL NUMBER OF NODES------------------ 95
NUMBER OF BAR ELEMENTS---- ------------ 11
NUMBER OF DIFF  BAR MATERIALS----------  1
NUMBER OF BEAM ELEMENTS----------------  0
NUMBER OF DIFF  BEAM MATERIALS---------  0
NUMBER OF NODAL LINKS -----------------  0
NUMBER OF INTERFACE ELEMENTS-----------  0
NO  OF INTERFACE ELE  IN PREEXIST  PART  0
NUMBER OF INTERFACE ELE  IN FOUNDATION-  0
NUMBER OF INTERFACE MATERIALS-------- -  0
TOTAL NUMBER OF SOIL ELEMENTS---------- 78
NUMBER OF DIFF  SOIL MATERIALS---------  3
NUMBER OF ELEMENTS IN FOUNDATION------- 36
NUMBER OF NODES IN FOUNDATION---------- 52
NUMBER OF PREEXISTING ELEMENTS---------  0
NUMBER OF PREEXISTING NODES------------  0
NUMBER OF CONSTRUCTION LAYERS----------  6
NUMBER OF LOAD CASES-------------------  2

CALING FACTOR ---------       1 00000

ATMOSPHERIC PRESSURE ---       1 05300

UNIT WEIGHT OF WATER ---        03120

OMPUTATION SEQUENCE FOR A TOTAL OF     8  INCREMENTS
----------------------------------------------------

 INCREMENT NO   1      APPLY LOAD CASE   1

 INCREMENT NO   2      PUT ON LAYER NO   1

 INCREMENT NO   3      PUT ON LAYER NO   2

 INCREMENT NO   4      PUT ON LAYER NO   3

 INCREMENT NO   5      PUT ON LAYER NO   4

 INCREMENT NO   6      PUT ON LAYER NO   5

 INCREMENT NO   7      PUT ON LAYER NO   6

 INCREMENT NO   8      APPLY LOAD CASE   2
```

NODAL POINT INPUT DATA

NODE NUMBER	NODAL POINT COORDINATES X-ORD	Y-ORD	B C CODE X	Y	ZZ
1	000	000	1	1	1
2	10 000	000	1	1	1
3	20.000	.000	1	1	1
4	30.000	000	1	1	1
5	36 000	000	1	1	1
6	42 000	.000	1	1	1
7	50.000	.000	1	1	1
8	54.000	.000	1	1	1
9	58 000	000	1	1	1
10	66 000	000	1	1	1
11	74.000	000	1	1	1
12	82.000	.000	1	1	1
13	90 000	000	1	1	1
14	000	4 000	1	0	1
15	10.000	4 000	0	0	0
16	20.000	4 000	0	0	0
17	30 000	4 000	0	0	0
18	36 000	4 000	0	0	0
19	42 000	4.000	0	0	0
20	50 000	4 000	0	0	0
21	54 000	4 000	0	0	0
22	58 000	4 000	0	0	0
23	66.000	4 000	0	0	0
24	74 000	4.000	0	0	0
25	82 000	4 000	0	0	0
26	90 000	4 000	1	0	1
27	000	7 000	1	0	1
28	10 000	7 000	0	0	0
29	20 000	7 000	0	0	0
30	30 000	7 000	0	0	0
31	36 000	7 000	0	0	0
32	42.000	7.000	0	0	0
33	50 000	7 000	0	0	0
34	54.000	7.000	0	0	0
35	58.000	7 000	0	0	0
36	66 000	7 000	0	0	0
37	74 000	7 000	0	0	0
38	82.000	7.000	0	0	0
39	90.000	7.000	1	0	1
40	.000	10.000	1	0	1
41	10 000	10 000	0	0	0
42	20 000	10 000	0	0	0
43	30.000	10.000	0	0	0
44	36 000	10.000	0	0	0
45	42.000	10 000	0	0	0
46	50.000	10 000	0	0	0
47	54 000	10.000	0	0	0
48	58 000	10.000	0	0	0
49	66 000	10 000	0	0	0
50	74.000	10 000	0	0	0
51	82.000	10.000	0	0	0
52	90.000	10.000	1	0	1
53	36 000	11 500	0	0	0
54	42.000	11.500	0	0	0
55	50.000	11.500	0	0	0
56	54.000	11 500	0	0	0
57	58 000	11 500	0	0	0
58	66 000	11 500	0	0	0
59	74.000	11.500	0	0	0
60	82.000	11 500	0	0	0
61	90.000	11 500	1	0	1
62	42.000	13.000	0	0	0
63	50 000	13 000	0	0	0
64	54.000	13.000	0	0	0
65	58 000	13.000	0	0	0
66	66 000	13.000	0	0	0
67	74 000	13 000	0	0	0
68	82.000	13.000	0	0	0
69	90.000	13 000	1	0	1
70	46.000	14.000	0	0	0
71	50 000	14 000	0	0	0
72	54.000	14.000	0	0	0
73	58.000	14.000	0	0	0
74	66.000	14.000	0	0	0
75	74 000	14 000	0	0	0
76	82.000	14 000	0	0	0
77	90.000	14.000	1	0	1
78	50.000	15.000	0	0	0
79	54 000	15 000	0	0	0
80	58.000	15 000	0	0	0
81	66 000	15 000	0	0	0
82	74.000	15 000	0	0	0
83	82 000	15 000	0	0	0
84	90.000	15.000	1	0	1
85	54 000	16.000	0	0	0
86	58 000	16.000	0	0	0
87	66 000	16 000	0	0	0
88	74.000	16.000	0	0	0
89	82 000	16.000	0	0	0
90	90 000	16 000	1	0	1
91	58 000	17 000	0	0	0
92	66 000	17.000	0	0	0
93	74 000	17 000	0	0	0
94	82 000	17 000	0	0	0
95	90 000	17 000	1	0	1

BAR ELEMENTS-------

MATERIAL NUMBER	E	AREA	WEIGHT/LENGTH
1	480	1.00	0.

ELMT NO	CONNECTED NODES I	CONNECTED NODES J	MATL NO.
1	41	42	1
2	42	43	1
3	43	44	1
4	44	45	1
5	45	46	1
6	46	47	1
7	47	48	1
8	48	49	1
9	49	50	1
10	50	51	1
11	51	52	1

SOIL MATERIAL PROPERTY DATA

MATL	UNIT WT	YOUNG'S MODULUS CONSTANT	YOUNG'S MODULUS EXPONENT	RATIO	BULK MODULUS CONSTANT	BULK MODULUS EXPONENT	STRENGTH PARAMETERS C	PHI	DPHI	KO
1	0680	6000 00	.500	500	1500 00	600	00	35.00	00	.50
2	.0530	40 00	300	900	20 00	200	05	00	00	50
3	0600	1000 00	400	700	500.00	500	.50	40.00	00	50

FOUR NODES SOLID ELEMENT DATA

ELET NO	CONNECTED NODES I	J	K	L	MATL NO	ELEMENT CENTER COORDINATES X-ORD	Y-ORD
1	1	2	15	14	3	5 000	2 000
2	2	3	16	15	3	15.000	2 000
3	3	4	17	16	3	25.000	2 000
4	4	5	18	17	2	33.000	2.000
5	5	6	19	18	2	39 000	2 000
6	6	7	20	19	2	46.000	2.000
7	7	8	21	20	2	52.000	2.000
8	8	9	22	21	2	58.000	2 000
9	9	10	23	22	3	62.000	2 000
10	10	11	24	23	3	70.000	2.000
11	11	12	25	24	3	78.000	2.000
12	12	13	26	25	3	86.000	2.000
13	14	15	28	27	3	5 000	5 500
14	15	16	29	28	3	15 000	5 500
15	16	17	30	29	2	25.000	5 500
16	17	18	31	30	2	33.000	5.500
17	18	19	32	31	2	39.000	5.500
18	19	20	33	32	2	46.000	5.500
19	20	21	34	33	2	52.000	5.500
20	21	22	35	34	2	58.000	5.500
21	22	23	36	35	2	62.000	5 500
22	23	24	37	36	3	70.000	5.500
23	24	25	38	37	3	78 000	5 500
24	25	26	39	38	3	86 000	5 500
25	27	28	41	40	3	5.000	8 500
26	28	29	42	41	2	15 000	8.500
27	29	30	43	42	2	25 000	8 500
28	30	31	44	43	2	33.000	8.500
29	31	32	45	44	2	39.000	8 500
30	32	33	46	45	2	46.000	8 500
31	33	34	47	46	2	52 000	8 500
32	34	35	48	47	2	58 000	8.500
33	35	36	49	48	2	62 000	8.500
34	36	37	50	49	2	70.000	8.500
35	37	38	51	50	3	78 000	8 500
36	38	39	52	51	3	86.000	8.500
37	43	44	53	53	1	34.500	10.750
38	44	45	54	53	1	39 000	10.750
39	45	46	55	54	1	46 000	10 750
40	46	47	56	55	1	52.000	10.750
41	47	48	57	56	1	58 000	10 750
42	48	49	58	57	1	62.000	10.750
43	49	50	59	58	1	70.000	10 750
44	50	51	60	59	1	78.000	10.750
45	51	52	61	60	1	86.000	10 750
46	53	54	62	62	1	40.500	12 250
47	54	55	63	62	1	46 000	12 250
48	55	56	64	63	1	52.000	12 250
49	56	57	65	64	1	58.000	12 250
50	57	58	66	65	1	62.000	12 250
51	58	59	67	66	1	70 0r0	12 250
52	59	60	68	67	1	78 000	12 250
53	60	61	69	68	1	86.000	12.250
54	62	63	71	70	1	47 000	13.500
55	63	64	72	71	1	52 000	13 500
56	64	65	73	72	1	58 000	13 500
57	65	66	74	73	1	62 000	13 500
58	66	67	75	74	1	70 000	13 500
59	67	68	76	75	1	78 000	13.500
60	68	69	77	76	1	86 000	13 500
61	70	71	78	78	1	49 000	14 500
62	71	72	79	7A	1	52.000	14 500
63	72	73	80	79	1	58 000	14 500
64	73	74	81	80	1	62 000	14 500
65	74	75	82	81	1	70 000	14 500
66	75	76	83	82	1	78 000	14 500
67	76	77	84	83	1	86 000	14 500
68	78	79	85	85	1	53.000	15 500
69	79	80	86	85	1	58 000	15.500
70	80	81	87	86	1	62 000	15.500
71	81	82	88	87	1	70 000	15 500
72	82	83	89	88	1	78.000	15 500
73	83	84	90	89	1	86.000	15 500
74	85	86	91	91	1	57 000	16 500
75	86	87	92	91	1	62 000	16 500
76	87	88	93	92	1	70 000	16 500
77	88	89	94	93	1	78 000	16.500
78	89	90	95	94	1	86 000	16 500

SSTIPN 1 LAYER OF GEOTEXTILE, P=4000 PPI, E=5%, EXTENDED, T=1000

LOAD CASE ---------------------------- 2

LARGEST ELE NO IN THIS INCREMENT 78

LARGEST N P NO IN THIS INCREMENT 95

BAND WIDTH---------------------- 40

TOTAL NUMBER OF EQUATIONS--------- 222

NUMBER OF EQUATIONS IN BLOCK------ 84

NUMBER OF BLOCKS----------------- 3

NUMBER OF N.P. FORCE CARDS-------- 3

NUMBER OF PRESSURE CARDS---------- 0

NODAL POINT FORCES (WEIGHTS OF ADDED ELEMENTS)

NP	X-FORCE	Y-FORCE
1	0	0
2	0	0
3	0	0
4	0	0
5	0	0
6	0	0
7	0	0
8	0	0
9	0	0
10	0	0
11	0	0
12	0	0
13	0	0
14	0	0
15	0	0
16	0	0
17	0	0
18	0	0
19	0	0
20	0	0
21	0	0
22	0	0
23	0	0
24	0	0
25	0	0
26	0	0
27	0	0
28	0	0
29	0	0
30	0	0
31	0	0
32	0	0
33	0	0
34	0	0
35	0	0
36	0	0
37	0	0
38	0	0
39	0	0
40	0	0
41	0	0
42	0	0
43	0	0
44	0	0
45	0	0
46	0	0
47	0	0
48	0	0
49	0	0
50	0	0
51	0	0
52	0	0
53	0	0
54	0	0
55	0	0
56	0	0
57	0	0
58	0	0
59	0	0
60	0	0
61	0	0
62	0	0

63	0	0
64	0	0
65	0	0
66	0	0
67	0	0
68	0	0
69	0	0
70	0	0
71	0	0
72	0	0
73	0	0
74	0.	0
75	0	0.
76	0	0
77	0	0
78	0.	0.
79	0.	0.
80	0	0
81	0	0
82	0	0
83	0	0
84	0	0
85	0	0
86	0	0
87	0	0
88	0	0
89	0	0
90	0	0.
91	0	0
92	0	-4 50
93	0	-4 50
94	0.	-2.00
95	0	0

LOAD CASE : 2   ITERATION : 2

NP	DELTA-X	DELTA-Y	DELTA-ZZ	X-DISP	Y-DISP	ZZ-ROTAT	TOTAL	NP
1	0000	.0000	0000	0000	0000	0000	.0000	1
2	0000	0000	0000	0000	0000	0000	0000	2
3	0000	0000	0000	.0000	0000	0000	0000	3
4	0000	0000	0000	0000	0000	0000	0000	4
5	.0000	.0000	.0000	0000	.0000	.0000	.0000	5
6	.0000	0000	.0000	0000	0000	.0000	0000	6
7	0000	.0000	0000	.0000	.0000	0000	0000	7
8	0000	0000	0000	0000	0000	0000	0000	8
9	0000	0000	0000	0000	0000	0000	0000	9
10	0000	0000	0000	0000	.0000	0000	0000	10
11	0000	.0000	.0000	.0000	0000	.0000	0000	11
12	0000	0000	0000	0000	0000	0000	0000	12
13	0000	0000	0000	0000	0000	.0000	0000	13
14	0000	- 0001	0000	0000	- 0013	0000	0013	14
15	- 0001	0001	.0000	- 0007	0007	0000	0010	15
16	0000	0000	0000	- 0003	- 0005	0000	0006	16
17	0000	.0000	0000	-.0041	.0020	.0000	0046	17
18	- 0003	0017	0000	- 1553	0088	0000	1555	18
19	- 0074	0053	.0000	-.2106	- 0894	0000	2218	19
20	- 0185	0027	0000	- 1259	- 1043	0000	1635	20
21	- 0174	- 0060	0000	- 0606	- 1281	0000	1380	21
22	- 0004	0002	0000	0005	- 0041	0000	0041	22
23	- 0009	- 0027	0000	0001	- 0057	0000	0057	23
24	0013	- 0057	0000	0020	- 0108	0000	0110	24
25	0024	- 0020	0000	0027	- 0055	0000	0061	25
26	0000	0008	0000	0000	- 0025	0000	0025	26
27	0000	- 0003	0000	0000	- 0023	0000	0023	27
28	- 0003	0001	0000	- 0025	0013	0000	0029	28
29	0000	0000	0000	0005	- 0006	0000	0008	29
30	- 0008	- 0004	0000	- 1048	0463	0000	1145	30
31	- 0036	0045	0000	- 1759	0183	0000	1768	31
32	- 0196	0155	0000	- 2221	- 1188	0000	2519	32
33	- 0582	0119	0000	- 2043	- 1598	0000	2657	33
34	- 0832	0051	0000	- 1888	- 2020	0000	2765	34
35	- 0868	- 0277	0000	- 1482	- 1517	0000	2121	35
36	- 0019	- 0072	0000	0011	- 0150	0000	0151	36
37	0030	- 0108	0000	0037	- 0196	0000	0199	37
38	0030	- 0037	0000	0030	- 0105	0000	0109	38
39	0000	0022	0000	0000	- 0039	0000	0039	39
40	0000	- 0003	0000	0000	- 0030	0000	0030	40
41	- 0013	0003	0000	- 0108	0026	0000	0111	41
42	- 0050	0009	0000	- 0339	0090	0000	0350	42
43	- 0088	-.0007	0000	- 0564	0775	0000	0958	43
44	- 0101	0073	0000	- 0618	0049	0000	0620	44
45	- 0124	0239	0000	- 0676	- 1584	0000	1722	45
46	- 0146	0210	0000	- 0638	- 2654	0000	2729	46
47	- 0153	0133	0000	- 0561	- 2695	0000	2753	47
48	- 0156	- 0216	0000	- 0468	- 2239	0000	2287	48
49	0025	- 1136	0000	- 0106	- 2326	0000	2329	49
50	0052	- 0261	0000	0020	- 0453	0000	0454	50
51	- 0004	- 0025	0000	- 0018	- 0114	0000	0115	51
52	0000	0030	0000	0000	- 0072	0000	0072	52
53	- 0121	0075	0000	- 0467	0478	0000	0668	53
54	- 0121	0242	0000	- 0412	- 0856	0000	0950	54
55	- 0139	0212	0000	- 0430	- 1914	0000	1961	55
56	- 0126	0131	0000	- 0406	- 2317	0000	2352	56
57	0066	- 0211	0000	- 0675	- 2371	0000	2465	57
58	- 0079	- 1152	0000	- 0301	- 2590	0000	2608	58
59	- 0053	- 0278	0000	0464	- 0924	0000	1034	59
60	- 0029	- 0029	0000	- 0040	- 0108	0000	0115	60

61	0000	0033	0000	0000	- 0052	0000	0052	61
62	- 0118	0241	0000	- 0281	- 0336	0000	0438	62
63	-.0116	.0219	0000	- 0307	-.0926	0000	0975	63
64	-.0147	.0119	0000	- 0357	- 1152	0000	1206	64
65	-.0239	- 0220	0000	-.0468	- 1429	0000	1504	65
66	- 0281	- 1192	0000	- 0519	- 1946	0000	2014	66
67	-.0121	-.0278	.0000	- 0246	-.1203	0000	1228	67
68	- 0064	-.0034	.0000	-.0079	- 0099	0000	0127	68
69	.0000	.0033	0000	0000	- 0030	0000	.0030	69
70	-.0114	0229	0000	- 0202	- 0275	0000	0341	70
71	- 0101	0222	.0000	- 0216	-.0508	0000	.0550	71
72	- 0095	0118	.0000	- 0240	- 0722	0000	0761	72
73	- 0149	- 0195	0000	- 0324	- 1022	.0000	1072	73
74	- 0173	- 1253	0000	- 0373	- 1812	0000	1850	74
75	- 0151	- 0282	0000	-.0271	-.1307	0000	1335	75
76	- 0080	-.0035	.0000	- 0107	-.0091	0000	0141	76
77	0000	0032	0000	0000	- 0016	0000	0016	77
78	- 0077	0221	0000	- 0126	- 0189	0000	0211	78
79	- 0039	0115	.0000	-.0115	-.0352	0000	0370	79
80	- 0029	-.0181	0000	- 0133	- 0655	0000	0668	80
81	-.0038	-.1282	0000	- 0160	- 1622	0000	1630	81
82	0279	- 1890	0000	0189	- 2498	0000	2505	82
83	5207	- 0766	0000	5188	-.0811	.0000	.5251	83
84	.0000	0865	0000	0000	0832	0000	0832	84
85	0010	0104	0000	- 0023	-.0054	0000	.0058	85
86	0097	- 0163	0000	005	- 0333	0000	0237	86
87	0091	-.1327	0000	0037	- 1468	0000	1466	87
88	0048	- 3670	.0000	-.0009	-.3727	0000	.3727	88
89	.4235	- 1554	0000	.3955	-.1790	0000	4341	89
90	0000	2133	0000	0000	1937	0000	1937	90
91	0203	- 0158	.0000	0203	- 0158	0000	.0258	91
92	.0325	- 1335	.0000	0325	-.1335	0000	.1374	92
93	0369	-.3676	0000	0369	- 3676	.0000	3694	93
94	2424	- 2771	0000	2424	-.2771	0000	3682	94
95	0000	.2359	.0000	0000	.3359	0000	3359	95

STRUCTURAL ELEMENTS - LINEAR ELASTIC

BAR ELEMENTS--INTERNAL MEMBER FORCES

ELEMENT NO.	AXIAL FORCE
INCREMENTAL VALUES	
1	- 1779
2	- 1779
3	- 1072
4	- 1813
5	- 1356
6	-.0802
7	-.0359
8	1 0846
9	1600
10	- 3344
11	0250
TOTAL VALUES	
1	-1 1070
2	-1 0808
3	- 4370
4	- 4588
5	2272
6	9180
7	1 1233
8	2.1718
9	7563
10	-.2285
11	1079

FOUR NODE SOLID ELEMENTS - MODULI AND STRAINS (STRAINS IN PERCENT)

ELE	ELAS MOD	BULK MOD	SHEAR MOD	POIS	EPS-X	EPS-Y	GAM-XY	EPS-1	EPS-3	GAMMAX	ELE
1	541 7	343 8	233 4	161	004	007	- 001	007	004	004	1
2	494 0	313 2	215 4	156	- 002	-.002	018	007	- 011	018	2
3	536 5	335 0	232 7	153	019	- 019	042	029	- 029	057	3
4	7	17 3	2	494	1 280	- 135	1 936	1 755	- 631	2 386	4
5	7	17 4	2	494	461	758	5 225	3 226	-2 007	5 233	5
6	7	18 0	2	494	-.530	2 172	4 424	3.413	-1 771	5 183	6
7	7	18 4	2	493	- 939	2 881	2 481	3.248	-1.306	4 554	7
8	6	17 1	.2	494	- 640	1 628	- 896	1 713	- 726	2 439	8
9	474 6	343 0	195 3	215	002	123	004	123	002	121	9
10	476.0	363 9	192.7	235	- 012	207	006	207	- 012	219	10
11	477 5	374 4	192 0	244	- 005	203	- 093	213	- 014	227	11
12	512 3	365 8	211 5	211	017	100	-.053	107	009	098	12
13	538 1	319 9	238 8	127	016	006	002	016	006	011	13
14	371 7	222 1	164 5	130	- 017	- 009	033	004	- 030	034	14
15	1 6	13 5	5	480	545	-.735	1 417	860	-1 050	1 910	15
16	9 3	17 1	3.3	403	1 852	- 897	2 198	2 238	-1 282	3 520	16
17	1 2	16 9	4	488	847	663	2 330	1 923	- 413	2 337	17
18	6	17 2	.2	494	- 641	2 411	2 223	2 773	-1 003	3 776	18
19	.6	17 1	2	494	-1 133	2 854	3.910	3 652	-1 932	5 584	19
20	7	18 2	2	494	-1 147	3 725	2 624	4 055	-1 478	5 534	20
21	6	17 2	2	494	- 931	2 615	1 616	2 790	-1 106	3 897	21
22	461.0	360 2	185 5	242	- 028	301	013	.301	- 029	329	22
23	410.6	311 8	166 5	233	000	.230	- 123	245	- 015	260	23
24	457 2	311 4	191 8	192	036	107	- 063	119	024	095	24
25	329 7	214 2	140 7	172	067	- 010	091	088	- 031	119	25
26	0	1	0	.495	100	- 181	689	331	- 413	744	26
27	0	1	0	195	639	-.879	- 811	754	-.794	1 548	27
28	1 3	13 5	4	484	638	- 287	-1 870	1 216	- 874	2.090	28
29	1 5	14 6	5	483	433	883	-1 974	1 670	- 355	2 025	29
30	8	15 2	2	494	- 135	1 755	-3 744	2.907	-1 287	4 194	30
31	9	15 9	2	494	- 290	2 220	-4 472	3 529	-1 599	5 128	31
32	8	16 6	2	494	- 624	2.327	-5 100	3 799	-2 095	5 892	32
33	7	17 7	2	494	-1 160	4 829	-2 295	5 042	-1 372	6 414	33
34	9	17 0	3	491	- 095	4.057	- 918	4 107	- 145	4.252	34
35	309.2	271 3	121 1	277	029	445	- 181	460	.014	446	35
36	340 0	216 1	146 4	161	.007	069	012	070	007	063	36
37	422 6	461 3	159 7	323	094	- 031	- 061	101	- 038	139	37
38	11 9	398 6	4 0	495	003	000	1 345	674	- 671	1 345	38
39	316.3	437 2	115 6	364	- 008	053	235	144	- 099	243	39
40	146 7	415 8	51 0	439	- 120	863	- 047	864	- 120	984	40
41	1	4 0	0	495	228	2 776	297	2 785	220	2 565	41
42	180 5	419 6	63 4	425	- 442	3 487	1 987	3 723	- 679	4 402	42
43	677 9	557 1	265 2	278	- 543	3 204	-2 804	3.870	-1 010	4 880	43
44	632 5	550 3	248 1	275	.342	1 721	-2 084	2 231	- 218	2 499	44
45	939 5	647 1	392 5	197	- 034	066	019	067	- 035	102	45
46	1	4 0	0	495	- 070	009	834	388	- 450	837	46
47	181 1	413 8	63.6	424	028	- 013	196	108	- 093	200	47
48	259 4	429 7	93.2	392	028	042	274	172	- 102	274	48
49	11 9	398 6	4 0	495	- 178	110	1 907	930	- 998	1 929	49
50	1	4 0	0	495	101	228	2.453	1.592	-1 263	2 856	50
51	815.6	842 5	327 5	245	-.223	2 783	013	2 783	- 223	3 006	51
52	2080 4	1078 3	1006 4	033	- 162	2 662	- 386	2 675	- 175	2 850	52
53	770 8	549 3	318 5	210	- 074	070	055	075	- 079	154	53
54	208 0	423 2	73 6	413	027	- 013	033	033	- 019	052	54
55	559.7	477 6	220 5	.269	.072	- 001	- 027	074	- 004	078	55
56	634 1	552 4	248 7	275	221	- 112	127	233	- 124	357	56
57	82 6	408 0	28 2	485	058	205	245	274	- 011	285	57
58	1	4 0	0	495	- 210	2.945	- 927	3.012	-.276	3 288	58
59	2274.6	1137 3	1137.3	000	- 183	2 659	- 729	2.705	- 229	2 934	59
60	946 3	559 6	421.0	124	- 115	066	.057	070	- 119	189	60
61	.1	4 0	0	495	007	- 016	- 104	048	- 058	106	61
62	383 8	443 6	134 9	348	-.008	007	-.093	047	- 047	094	62
63	523 9	466 8	204.5	281	101	- 051	- 081	111	- 061	173	63
64	665 0	539 3	375.5	152	039	090	058	104	026	078	64
65	1	4 0	0	495	- 255	9 507	-2 684	9 626	- 433	10 119	65
66	1	4 0	0	495	-3.195	13.048	-29 897	21 939	-12 085	34 024	66
67	1	4 0	0	495	3 177	- 452	-27 539	15 251	-12 526	27 777	67
68	245 1	427 9	87 7	398	- 072	100	- 199	146	- 117	263	68
69	383 2	446 3	143 0	340	- 096	- 039	- 151	013	- 148	162	69
70	373 0	444 9	138.8	344	018	140	139	.171	- 013	185	70
71	1	4 0	0	495	- 174	9 149	2 338	9 293	- 318	9 611	71
72	1	4 0	0	495	-5.577	13 919	5 466	14 297	-5 956	20 253	72
73	1	4 0	0	495	5 718	- 446	2 843	6 030	- 758	6 788	73
74	1	4 0	0	.495	- 216	- 045	- 398	086	- 347	433	74
75	1082 0	605 7	481 7	102	- 073	016	- 240	100	- 157	256	75
76	1587 4	627 1	773 7	032	000	065	150	114	- 049	164	76
77	1	4 0	0	495	-3 939	6 112	5 858	5 904	-4 730	11 634	77
78	1	4 0	0	495	4 199	- 046	3 217	4 740	- 587	5 327	78

FOUR NODE SOLID ELEMENTS - STRESSES

ELE	SIG-X	SIG-Y	TAU-XY	SIG-1	SIG-3	TAU-MAX	THETA	SIG1/SIG3	LEVEL	ELE
1	268	526	- 001	526	268	129	- 264	1 961	083	1
2	226	466	040	473	219	127	9 274	2 156	066	2
3	332	387	161	464	255	105	37 440	1 822	066	3
4	364	539	004	539	364	087	1 275	1 479	1 744	4
5	377	558	011	558	376	091	3 389	1 484	1 822	5
6	446	637	009	637	445	096	2 838	1 431	1 920	6
7	497	693	006	693	497	098	1 627	1 395	1 965	7
8	333	522	- 002	522	333	095	- 520	1 569	1 893	8
9	340	1 001	004	1 001	340	331	330	2 942	196	9
10	408	1 455	010	1 455	408	524	520	3 569	290	10
11	453	1 457	- 161	1 488	421	533	-9 891	3 533	291	11
12	392	909	- 111	932	370	281	-11 629	2 522	162	12
13	221	312	005	312	221	046	3 339	1 412	031	13
14	060	223	058	242	042	100	17 620	5 816	087	14
15	069	150	005	150	069	041	3 736	2 180	812	15
16	255	294	015	299	250	025	19 198	1 198	495	16
17	319	406	006	406	319	044	4 117	1 275	875	17
18	355	456	005	456	355	051	2 696	1 286	1 015	18
19	345	449	008	450	344	053	4 442	1 309	1 062	19
20	494	604	007	605	493	056	3 407	1 226	1 113	20
21	340	445	003	445	340	053	1 831	1 310	1 055	21
22	333	1 671	023	1 672	332	670	981	5 033	401	22
23	344	1 225	- 207	1 271	298	486	-12 585	4 264	302	23
24	342	857	- 121	898	301	199	-18 774	2 321	123	24
25	300	090	152	380	010	185	62 341	26 430	169	25
26	000	000	000	000	000	000	56 112	832	-1 000	26
27	021	- 004	- 012	028	- 009	018	-67 947	-2 774	-1 000	27
28	083	047	- 040	098	015	041	-50 625	6 569	811	28
29	147	228	- 007	228	147	041	-5 211	1 557	817	29
30	184	278	- 011	279	182	048	-6 736	1 530	967	30
31	234	326	- 015	328	231	048	-8 950	1 419	969	31
32	198	292	- 021	297	193	052	-11 887	1 534	1 033	32
33	529	630	- 015	632	527	052	-8 201	1 199	1 048	33
34	578	676	- 006	676	578	049	-3 398	1 171	985	34
35	615	1 741	- 196	1 774	581	597	-9 667	3 053	232	35
36	062	278	018	280	060	110	4 754	4 653	093	36
37	541	108	- 129	576	073	252	-74 634	7 875	2 557	37
38	034	070	100	154	- 050	102	39 814	-3 087	-1 000	38
39	167	297	120	368	096	136	30 767	3 844	1 057	39
40	- 008	205	025	208	- 011	109	6 654	-19 257	-1 000	40
41	026	254	040	261	019	121	9 608	13 574	4 674	41
42	041	443	419	707	- 223	465	32 175	-3 167	-1 000	42

43	112	1 324	-1 259	2 115	- 679	1 397	-32 151	-3 113	-1 000	43
44	434	936	456	1 206	165	521	30 580	7 331	2 353	44
45	- 110	.416	063	424	- 117	270	6 767	-3 611	-1 000	45
46	010	023	003	024	009	007	14 064	2 546	575	46
47	125	105	117	.232	- 003	117	47 437	-78 965	-1 000	47
48	331	461	361	763	029	367	39 898	26 421	9 450	48
49	-.255	- 172	- 053	- 146	- 281	066	-25 953	518	-1 000	49
50	112	402	- 061	414	100	157	-11 497	4 144	1 169	50
51	- 631	1 277	- 858	1 606	- 960	1 283	-20 979	-1 673	-1 000	51
52	-1 036	775	424	869	-1 131	1 000	12 550	- 769	-1 000	52
53	- 396	339	161	372	- 430	401	11 815	- 667	-1 000	53
54	157	033	078	195	- 005	100	64 314	-40 229	-1 000	54
55	587	176	- 048	.593	170	212	-83 402	3 489	925	55
56	1 537	- 276	311	1 588	- 328	958	80 542	-4 846	-1 000	56
57	1 071	1 211	- 042	1 223	1 059	082	-15 672	1 154	057	57
58	097	208	- 057	232	072	080	-22 861	3 212	822	58
59	-1 676	.887	- 271	.916	-1 704	1 310	-5 980	- 537	-1 000	59
60	- 850	259	213	299	- 889	594	10 486	- 336	-1 000	60
61	111	056	071	160	008	076	55 593	20 525	7 258	C1
62	066	011	- 078	122	- 044	083	-54 762	-2 743	-1 000	62
63	730	- 116	- 132	750	- 136	443	81 356	-5 528	-1 000	63
64	559	929	186	1 007	482	283	22 585	2 091	405	64
65	436	510	- 017	514	432	.041	-12 574	1 169	070	65
66	403	433	- 012	437	399	019	-19 258	1 096	036	66
67	215	326	- 006	327	215	056	-2 967	1 522	194	67
68	003	271	- 156	343	- 069	206	-24 678	-4 973	-1 000	68
69	- 611	- 518	- 186	- 372	- 757	192	-38 011	492	-1 000	69
70	629	921	175	1 002	547	227	25 050	1 832	309	70
71	427	476	- 009	477	426	026	-10 269	1 121	045	71
72	342	374	002	374	342	016	3 629	1 096	036	72
73	230	242	001	.242	230	006	5 311	1 054	020	73
74	- 002	.007	002	007	- 002	005	11 890	-2 956	-1 000	74
75	- 759	119	-1 158	.918	-1 559	1 238	-34 623	- 589	-1 000	/5
76	053	1 073	1 164	1 834	- 708	1 271	33 178	-2 591	-1 000	76
77	- 100	.125	002	125	099	013	5 286	1 256	095	77
78	184	198	001	198	184	007	5 334	1 075	028	78